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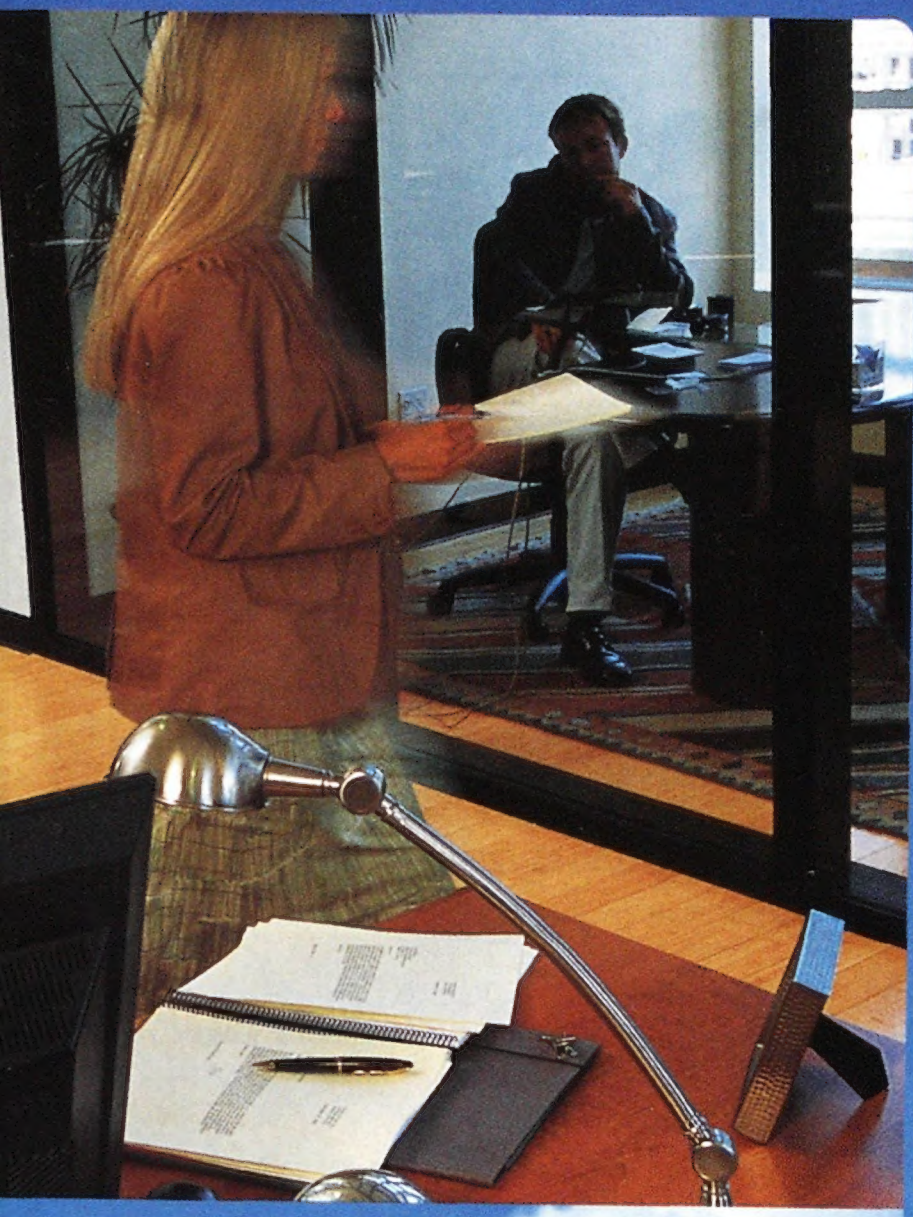

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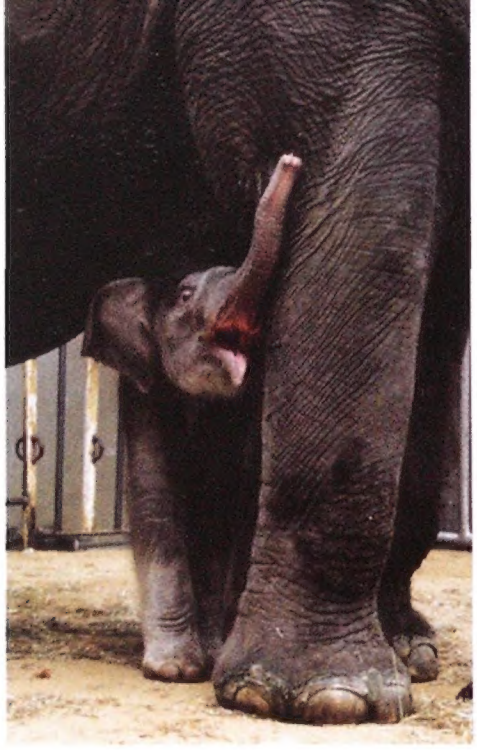

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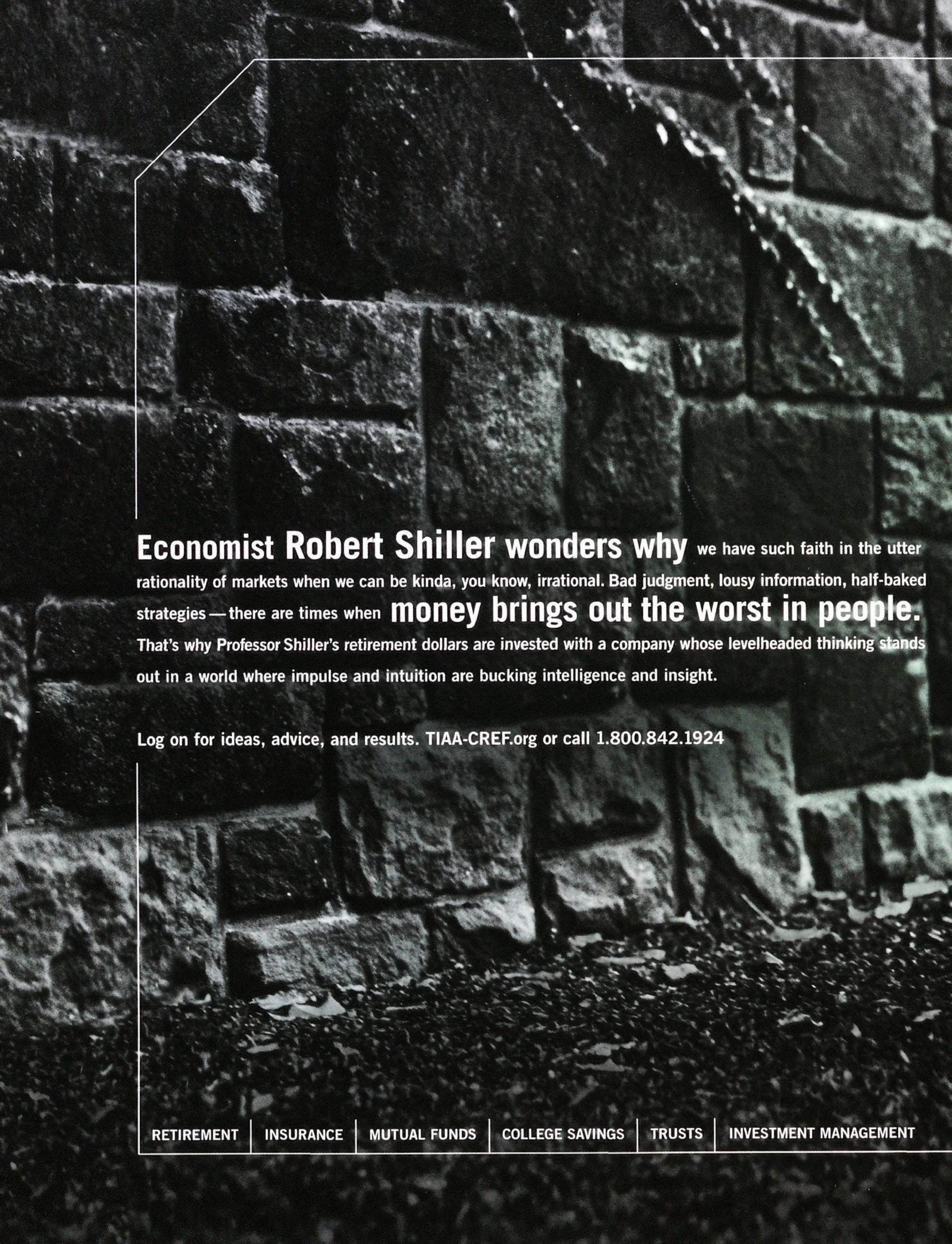

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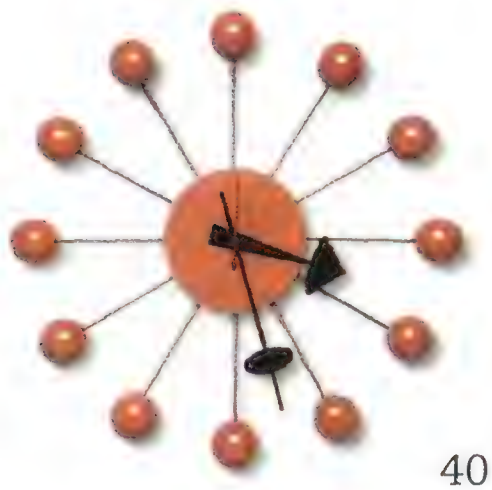

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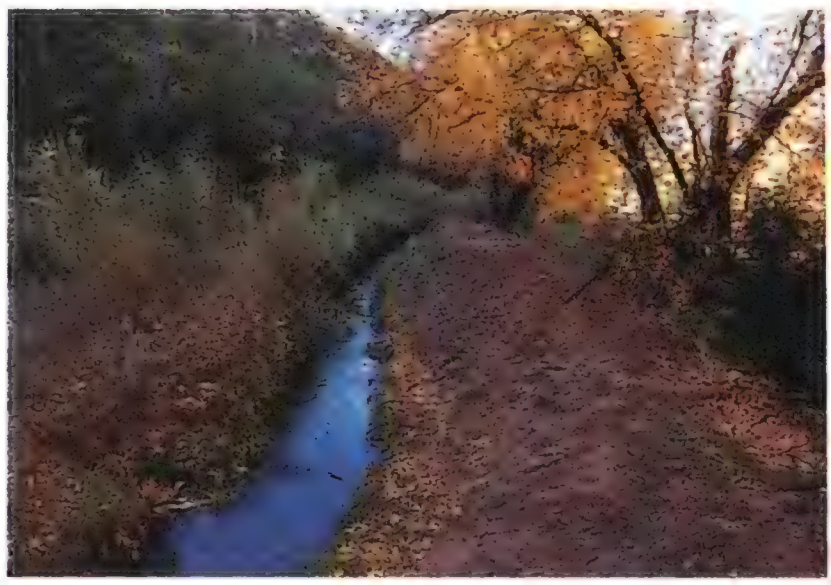

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BROOKLYN MUSEUM OF ART, NY; GLENN OAKLEY; GRANGER COLLECTION; ARNO GASTEIGER; PORTRAIT GERARD GASTAUD; BACKGROUND: RICHARD SCHMIDT/DAVID HOCKNEY

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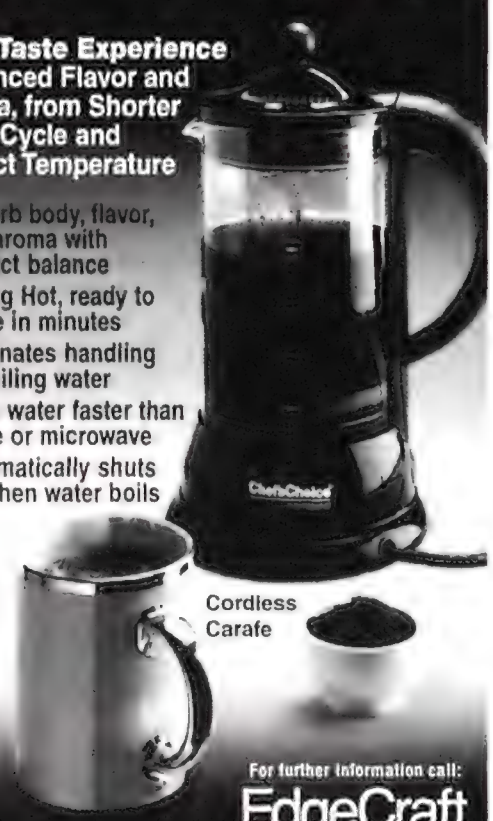

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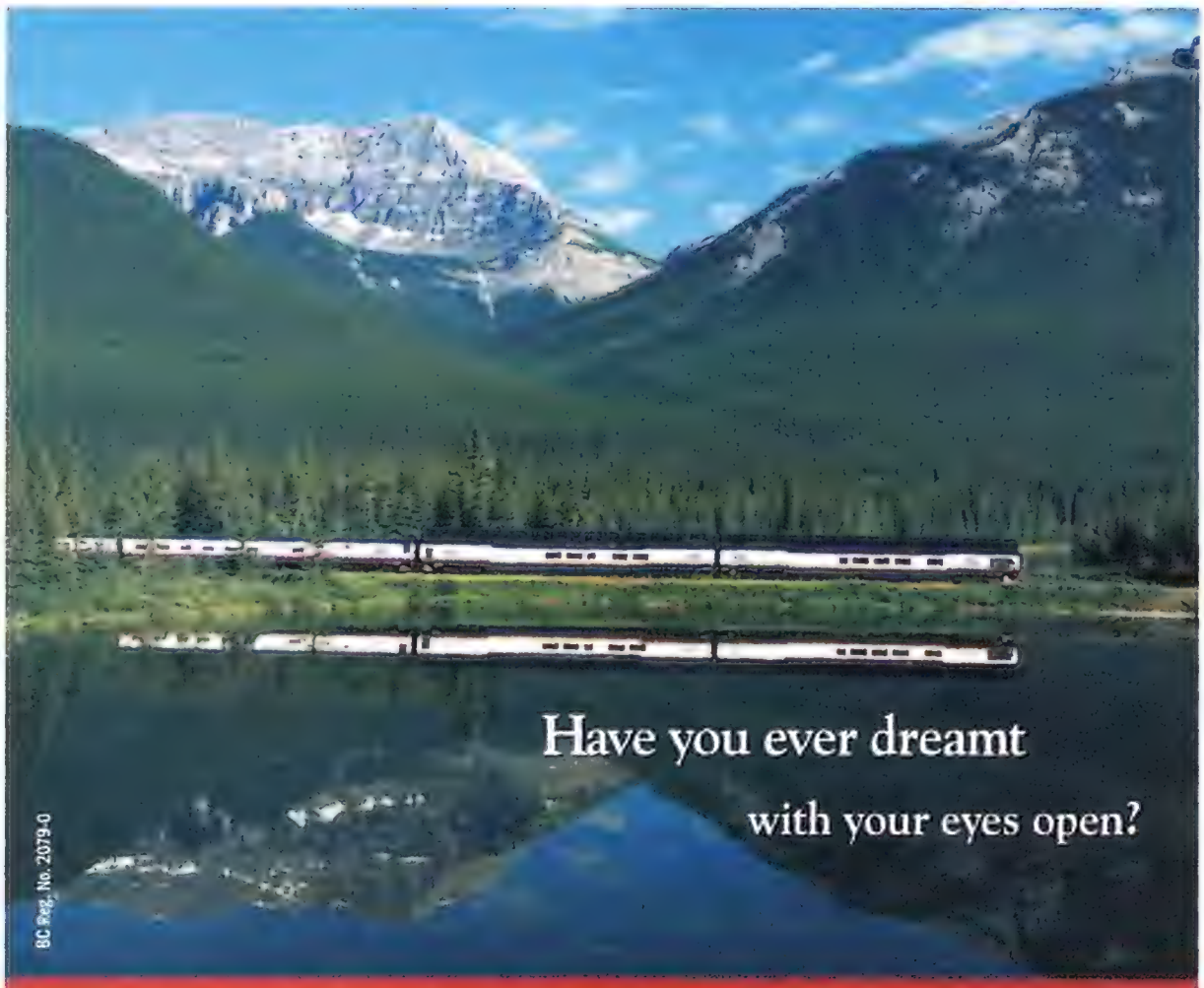

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BEHIND THE LINES

Role Models

OUR WRITERS EXPLORE NEW WORLDS IN TIME AND SPACE

BY CAREY WINFREY, EDITOR

REPORTING OUR STORY about David Hockney's theory that old masters secretly used curved mirrors and lenses to help with their artistry ("Mirror Images," p. 76), Jennifer Carrell was invited to pose—on a Los Angeles soundstage—à la Flemish artist Jan van Eyck's *Man in a Red Turban*. Though the turban had been concocted earlier that day from a pair of men's tights, a costume designer assured Carrell that the gown she was wearing was quite authentic. When she looked to see where it came from, she discovered a tag marked "Deep Space Nine," a *Star Trek* TV spin-off. So the joke among the BBC crew making a documentary about Hockney was that Carrell was decked out with a pair of knickers on her head and a *Star Trek* dress. Under studio lights, she says she felt as if she'd been "shrink-wrapped in carpet."

Carrell in costume: Star Treked and shrink-wrapped.

ALTHOUGH THE ISLAND OF TASMANIA BELONGS TO AUSTRALIA, ITS GREEN forested mountains reminded Derek Grzelewski more of his native New Zealand. At first glance, that is. "Then suddenly—boing! boing! boing!—a kangaroo is bouncing across the road," he says, "and in a river where I'd find trout at home, I see that wonderfully bizarre creature, the platypus." Alas, the Tasmanian devils he had hoped to observe in the wild remained frustratingly elusive, though he did manage encounters with several in what may be the world's most unusual "restaurant." For Grzelewski, observing the logging of Tasmania's old-growth eucalyptus forest—in a matter of weeks thousands of acres of prime devil habitat were done in by chain saws—was sad beyond measure: "The trees, which are similar to California's majestic redwoods, were gone and so were the devils." Yet at the same time, it was curiously uplifting. Despite the encroachments of civilization, Grzelewski reports, "these hardy, adaptable, industrial-strength beasts are in better shape and in greater numbers than ever. In their story, I find reassurance in the resilience of nature." In *his* story, you'll find a rip-roaring good read.

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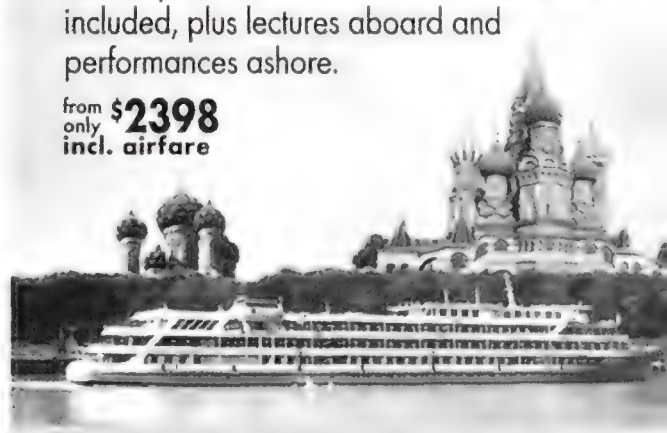

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FROM THE SECRETARY

YOU MIGHT EXPECT A CENTER FOR SHORT-LIVED Phenomena to be preoccupied with pop stars and political agendas, but the enterprise of that name that existed at the Smithsonian Astrophysical Observatory from 1968 to 1975 had a properly scientific mission: to take note of significant transitory events on earth and in space and to spread the word about them (on postcards no less, in that near but distant age!). Though the center succumbed to its prophetic name, its mission has endured in various other entities in the Institution, among which the National Museum of Natural History's Global Volcanism Program (GVP) stands out as unique in the world.

The GVP was formally established in 1984 on sturdy twin foundations: a database of the world's volcanoes that the museum's Department of Mineral Sciences had been building since 1971, and a global infrastructure that documents current volcanic activity. The GVP's indispensable resource is a worldwide network of volcano watchers—a far-flung front line of observers. The scientists in the program collect, analyze and disseminate information about the earth's more than 1,500 "active" volcanoes, defined as those that have shown signs of life and erupted within the past 10,000 years. (You can visit the Web site at www.volcano.si.edu/gvp/.)

Mexico's Parícutin was born in a cornfield in 1943.

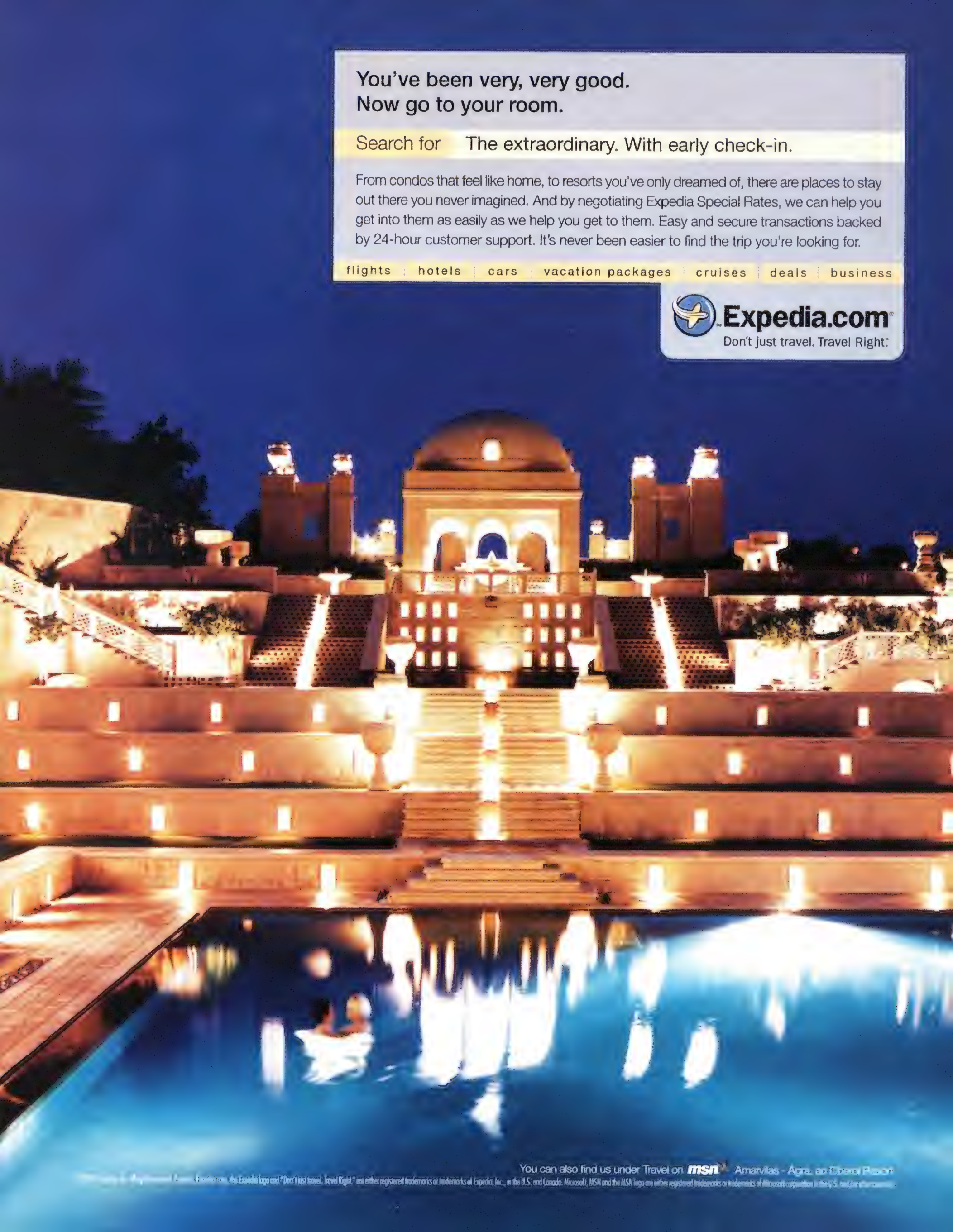
The program's database contains records for more than 8,000 dated eruptions and is of enormous value because it reveals patterns back through time. A volcano may exhibit signs of unrest, but are they cause for alarm? Scientists can take the pulse of a volcano today and compare it with a detailed history of its past behavior. The painstakingly assembled data—about earthquakes, ground deformation, lava flows, mudflows, ash clouds and fatalities—allow an informed diagnosis, which, in turn, may have an urgent application. Consider, for example, that in the past 20 years more than 100 airplanes have flown unintentionally into volcanic ash clouds, which are virtually undetectable by aircraft radar, and suffered some $250 million of damage to engines, aircraft exteriors and electronic equipment. Some of those encounters occurred hundreds of miles from an eruption. So it becomes critical to understand the emission and atmospheric drift of volcanic clouds.

Visitors to the Museum of Natural History can sample the extraordinary riches of the GVP archive on touch-screen terminals in the Geology, Gems and Minerals exhibit. The vivid computer displays are hotbeds of information about cinder cones, lava domes, shield volcanoes, stratovolcanoes and pyroclastic flows, and they tell you more than you ever thought you'd know about the viscosity of magma. But that's just the beginning. The most astonishing display shows a map of the earth on which colored triangles represent the world's volcanoes. Press a button and the icons begin to throb to a chorus of percussive pops keyed to real data about eruption types and magnitudes. You've set in motion the history of earth's volcanic eruptions since 1960. Those 40 years of volcanic activity—more than 1,200 eruptions—register on the screen in a dazzling blur in little more than a minute. But the gathering of the knowledge that informs the simulation has been the patient labor of years.

The GVP would have had a strong advocate in James Smithson himself, who, in 1813, more than three decades before there was a Smithsonian Institution, read a paper before the Royal Society of London about the "ejections" of volcanoes: "They cease to be local phenomena," he wrote. "They become principal elements in the history of our globe; they connect its present with its former condition; and we have good grounds for supposing, that in their flames are to be read its future destinies." In their flames, Smithsonian scientists have indeed learned to read the future—by linking it to a past of immense reach and consequence.

LAWRENCE M. SMALL, SECRETARY

CARL FRIES/U.S. GEOLOGICAL SURVEY SMITHSONIAN INSTITUTION, GLOBAL VOLCANISM PROGRAM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Now go to your room.
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BRAVE NEW WORLD

THIS ARTICLE SHOULD BE READ BY anyone who ventures an opinion on the ethics and possibilities of gene therapy, cloning and stem cell research. Too much of the public debate on these issues reflects ignorance about the most basic aspects of those procedures.

It's ironic that the article concluded by quoting President Bush on the need to make biomedical decisions based on "our capabilities and our conscience." The President's supporters and detractors recognize that his stem cell policy was a political compromise, not an ethical judgment. Using embryos created before the announcement but not those created the day after is hardly a moral distinction. We now know that the capabilities of existing stem cell lines were exaggerated. We may never know what cures were missed by cutting off the creation of new lines in August 2001.

Thomas A. Isaacson
Boulder, Colorado

OCTOBER SURPRISE

PAUL GRAY LABELS V. S. NAIPAUL "reactionary." "Truth seeker" and "visionary" would be my epithets. In his three carefully reported books about India, published over the period 1964-1990, one can see the growth of insight and compassion. Naipaul's long and remarkable travels display great courage and fortitude. We need his informed humanistic news of the world so much.

Naipaul also showed excellent judgment in giving Paul Theroux the brush-off. The young Theroux was a gifted writer, but he has become increasingly dark, solipsistic and tedious. His *New Yorker* piece about the friendship's end struck me as utterly self-serving.

Paul Spitzer
Trappe, Maryland

Paul Gray responds: I didn't call Naipaul "reactionary"; I applied that adjective to his views, "given the current climate." That he has ruffled received opinions seems to me inarguable. I share Mr. Spitzer's admiration for the author's vision and his dedication to the truth.

SKUNK MAN

AS THE PRODUCT OF A RURAL CHILDhood, and a lover of the outdoors, I found your story about Jerry Dragoo and his skunks amusing except for one thing: rabies is not "treatable." Although it can be prevented with a series of vaccinations, it is inevitably fatal once contracted.

Joseph M. Parisi, DVM
Cheektowaga, New York

MY MOTTO ALSO IS SMALL BUT FIERCE! I do not think it is unusual to be drawn to the mustelids, especially skunks—they're charming and fascinating. I spent years studying, raising, rehabilitating and enjoying striped skunks in and after grad school. Not many of us can say we've carried fully scented babies to class in our shirts or collected skunk scent sacs. It was great, and I still love skunks. I left research because, while I didn't mind getting sprayed, I couldn't face a lifetime of faculty meetings.

Kate Mink
Richford, New York

FRESH EYES

THE UNDATED LITHOGRAPH USED AS an example of the racist work Currier and Ives sometimes produced is a copy of a George Catlin painting. I view the painting (in the Smithsonian's collection) as commentary, not satire. In 1832, Catlin met the Assiniboin chief, who was known as The Light, when he was traveling east to visit Washington, D.C. At the time, he was wearing his tribal clothing. Meeting The Light on the return trip, Catlin was struck by his new clothes, and he made the painting to show the effect of "civilization." The tale ended badly: no one at home believed The Light's stories about the East, and he was murdered by one of his critics.

Janet Beltran
Bismarck, North Dakota

Please send letters for this column to Letters Editor, SMITHSONIAN, MRC 951, Washington, D.C. 20560-0951 or to LettersEd@simag.si.edu. Letters should include your telephone number and address and may be edited for clarity and length. Please send queries and comments about the Smithsonian Institution to info@info.si.edu or to VIARC, Public Inquiry Mail Service, Washington, D.C. 20560-0010.

Crisis at Central High

INDELIBLE IMAGES

PHOTOGRAPHER WILL COUNTS HAD JUST begun working for the *Arkansas Democrat* when Arkansas Governor Orval Faubus made a surprise televised announcement on the evening of Labor Day, September 2, 1957. In defiance of the federal government, Faubus had decided to dispatch more than 200 National Guardsmen to surround Little Rock's Central High School for September 3, the first day of classes. He claimed he was preventing violence as nine black students attempted to enroll in the all-white school as mandated by the landmark 1954 *Brown v. Board of Education* Supreme Court decision. In fact, the Guard prevented the "Little Rock Nine," as the students came to be called, from enrolling until the following day.

Counts, then 26, had himself graduated from Central, then called Little Rock High School, some few years before. Unlike the reporters in ties and jackets, some of whom were harassed as outsiders and arrested by the police, Counts wore an open-collared plaid shirt and blended in with the hostile crowd surrounding the school. On a reporter's tip, he slipped away from the media pack and went to another school entrance located near a street corner.

There, 15-year-old Elizabeth Eckford was approaching. "When I tried to squeeze past [a National Guardsman], he raised his rifle," Eckford, now 60 and a probation officer, recalls. "And the other guards moved in. I turned

WILL COUNTS

Counts (above) worked for the Associated Press and later directed the photojournalism program at Indiana University. Right: Forty years after the famous photograph was taken, Hazel Bryan Massery thanked Eckford for meeting with her at Central High. Eckford responded: "You are a very brave person to face the cameras again."

around and the crowd moved closer and closer." As she retreated, a dark-haired white student screamed "Nigger! Nigger! Nigger!" in Elizabeth's wake. Counts, who captured the scene on film, later wrote that "the courage and grace [Eckford] exhibited as she walked two blocks through the mob of school-integration dissidents became one of my most moving experiences." His image of Eckford taunted by the all-white crowd was a runner-up, along with other photographs he took during the crisis, for a 1957 Pulitzer Prize.

Over the decades Eckford rarely talked about that momentous day or of the many personal battles she and the other eight students fought that year. "My children never asked me about it because when they were little, they remembered reporters coming to the house [and] making Mommy cry." That reticence began to change in 1997. At a dedication of the Central High Visitor's Center and Museum, located across from the high school, Counts, then recently retired from Indiana University (where he taught photojournalism for 32 years), asked Eckford to pose for a 40th-anniversary photograph with Hazel Bryan Massery, the jeering girl in the picture. Although both women still lived in Little Rock, their paths had not crossed in 40 years (Massery, feeling, she says, like "the poster child of the hate generation," had long since apologized to Eckford in a 1963 phone call). On her part, Eckford told Counts, "I have always wanted to meet her."

"It was like any meeting of two strangers," Vivian Counts, the photographer's wife, remembers, "a little awkward and a little strained." Soon, however, the two women were chatting about their children and mutual acquaintances.

Counts, greatly admired by both colleagues and students, died after a four-year battle with cancer at age 70 in Bloomington, Illinois, last October. He "had a desire and passion to teach storytelling with photographs," says Scott Goldsmith, a former student who is now a photographer for *U.S. News and World Report*. Faubus served as governor of Arkansas until 1966. After that, he ran three times unsuccessfully for his former office and lost his last election to Bill Clinton in the 1986 Democratic primary. Faubus died of spinal cancer in 1994 at age 84. —*Helen E. Starkweather*

SCOTT GOLDSMITH; WILL COUNTS

Are you or someone you care for *increasingly...*

Forgetful?
Repeating questions?
Having trouble finding words?

When these problems interfere with everyday life, it could be Alzheimer's disease.

A medicine called ARICEPT® may help.

When you or someone you care for has gradually increasing memory problems, it may not be normal aging. It could be Alzheimer's disease, an incurable, progressive illness.

Today there's hope, including a prescription medicine called ARICEPT®. Once-daily ARICEPT® is clinically proven to treat the symptoms of mild to moderate Alzheimer's. In people who respond to ARICEPT®, symptoms may get better, stay the same or progress at a slower rate.

ARICEPT® is well tolerated but may not be for everyone. Some people may experience nausea, diarrhea, insomnia, vomiting, muscle cramps, fatigue or loss of appetite. In studies, these side effects were usually mild and temporary. Some people taking ARICEPT® may experience fainting. People at risk for ulcers should tell their doctors because their condition may get worse.

Only a doctor can say if memory problems are due to Alzheimer's disease. And the sooner you know, the sooner ARICEPT® may help. So speak to a doctor today and ask about ARICEPT®, the #1 prescribed medicine for Alzheimer's disease.

SEE A DOCTOR AND ASK ABOUT

ONCE-A-DAY
ARICEPT®
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5-MG AND 10-MG TABLETS

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To learn more and to receive a memory checklist, call
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MEDICINE TO REMEMBER™

ARICEPT® (Donepezil Hydrochloride Tablets)

Brief Summary—see package insert for full prescribing information. **INDICATIONS AND USAGE** ARICEPT® is indicated for the treatment of mild to moderate dementia of the Alzheimer's type. **CONTRAINDICATIONS** ARICEPT® is contraindicated in patients with known hypersensitivity to donepezil hydrochloride or to piperidine derivatives. **WARNINGS** ***Anesthesia:*** ARICEPT®, as a cholinesterase inhibitor, is likely to exaggerate succinylcholine-type muscle relaxation during anesthesia. ***Cardiovascular Conditions:*** Because of their pharmacological action, cholinesterase inhibitors may have vagotonic effects on the sinoatrial and atrioventricular nodes. This effect may manifest as bradycardia or heart block in patients both with and without known underlying cardiac conduction abnormalities. Syncopal episodes have been reported in association with the use of ARICEPT®. ***Gastrointestinal Conditions:*** Through their primary action, cholinesterase inhibitors may be expected to increase gastric acid secretion due to increased cholinergic activity. Therefore, patients should be monitored closely for symptoms of active or occult gastrointestinal bleeding, especially those at increased risk for developing ulcers, e.g., those with a history of ulcer disease or those receiving concurrent nonsteroidal anti-inflammatory drugs (NSAIDS). Clinical studies of ARICEPT® have shown no increase, relative to placebo, in the incidence of either peptic ulcer disease or gastrointestinal bleeding. ARICEPT®, as a predictable consequence of its pharmacological properties, has been shown to produce diarrhea, nausea and vomiting. These effects, when they occur, appear more frequently with the 10 mg/day dose than with the 5 mg/day dose. In most cases, these effects have been mild and transient, sometimes lasting one to three weeks, and have resolved during continued use of ARICEPT®. ***Genitourinary:*** Although not observed in clinical trials of ARICEPT®, cholinomimetics may cause bladder outflow obstruction. ***Neurological Conditions:*** Seizures: Cholinomimetics are believed to have some potential to cause generalized convulsions. However, seizure activity also may be a manifestation of Alzheimer's Disease. ***Pulmonary Conditions:*** Because of their cholinomimetic actions, cholinesterase inhibitors should be prescribed with care to patients with a history of asthma or obstructive pulmonary disease. **PRECAUTIONS Drug-Drug Interactions** ***Drugs Highly Bound to Plasma Proteins:*** Drug displacement studies have been performed *in vitro* between this highly bound drug (96%) and other drugs such as furosemide, digoxin, and warfarin. ARICEPT® at concentrations of 0.3-10 µg/mL did not affect the binding of furosemide (5 µg/mL), digoxin (2 ng/mL), and warfarin (3 µg/mL) to human albumin. Similarly, the binding of ARICEPT® to human albumin was not affected by furosemide, digoxin, and warfarin. ***Effect of ARICEPT® on the Metabolism of Other Drugs:*** No *in vivo* clinical trials have investigated the effect of ARICEPT® on the clearance of drugs metabolized by CYP 3A4 (e.g. cisapride, terfenadine) or by CYP 2D6 (e.g. imipramine). However, *in vitro* studies show a low rate of binding to these enzymes (mean K_i about 50-130 µM), that, given the therapeutic plasma concentrations of donepezil (164 nM), indicates little likelihood of interference. Whether ARICEPT® has any potential for enzyme induction is not known. ***Effect of Other Drugs on the Metabolism of ARICEPT®:*** Ketoconazole and quinidine, inhibitors of CYP450, 3A4 and 2D6, respectively, inhibit donepezil metabolism *in vitro*. Whether there is a clinical effect of these inhibitors is not known. Inducers of CYP 2D6 and CYP 3A4 (e.g., phenytoin, carbamazepine, dexamethasone, rifampin, and phenobarbital) could increase the rate of elimination of ARICEPT®. ***Use with Anticholinergics:*** Because of their mechanism of action, cholinesterase inhibitors have the potential to interfere with the activity of anticholinergic medications. ***Use with Cholinomimetics and Other Cholinesterase Inhibitors:*** A synergistic effect may be expected when cholinesterase inhibitors are given concurrently with succinylcholine, similar neuromuscular blocking agents or cholinergic agonists such as bethanechol. **Carcinogenesis, Mutagenesis, Impairment of Fertility** Carcinogenicity studies of donepezil have not been completed. Donepezil was not mutagenic in the Ames reverse mutation assay in bacteria. In the chromosome aberration test in cultures of Chinese hamster lung (CHL) cells, some clastogenic effects were observed. Donepezil was not clastogenic in the *in vivo* mouse micronucleus test. Donepezil had no effect on fertility in rats at doses up to 10 mg/kg/day (approximately 8 times the maximum recommended human dose on a mg/m² basis). **Pregnancy** ***Pregnancy Category C:*** Teratology studies conducted in pregnant rats at doses up to 16 mg/kg/day (approximately 13 times the maximum recommended human dose on a mg/m² basis) and in pregnant rabbits at doses up to 10 mg/kg/day (approximately 16 times the maximum recommended human dose on a mg/m² basis) did not disclose any evidence for a teratogenic potential of donepezil. However, in a study in which pregnant rats were given up to 10 mg/kg/day (approximately 8 times the maximum recommended human dose on a mg/m² basis) from day 17 of gestation through day 20 postpartum, there was a slight increase in still births and a slight decrease in pup survival through day 4 postpartum at this dose; the next lower dose tested was 3 mg/kg/day. There are no adequate or well-controlled studies in pregnant women. ARICEPT® should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. **Nursing Mothers** It is not known whether donepezil is excreted in human breast milk. ARICEPT® has no indication for use in nursing mothers. **Pediatric Use** There are no adequate and well-controlled trials to document the safety and efficacy of ARICEPT® in any illness occurring in children. **ADVERSE REACTIONS Adverse Events Leading to Discontinuation** The rates of discontinuation from controlled clinical trials of ARICEPT® due to adverse events for the ARICEPT® 5 mg/day treatment groups were comparable to those of placebo-treatment groups at approximately 5%. The rate of discontinuation of patients who received 7-day escalations from 5 mg/day to 10 mg/day, was higher at 13%. The most common adverse events leading to discontinuation, defined as those occurring in at least 2% of patients and at twice the incidence seen in placebo patients, are shown in Table 1.

Table 1. Most Frequent Adverse Events Leading to Withdrawal from Controlled Clinical Trials by Dose Group

Dose Group	Placebo	5 mg/day ARICEPT®	10 mg/day ARICEPT®
Patients Randomized	355	350	315
Event/%Discontinuing			
Nausea	1%	1%	3%
Diarrhea	0%	<1%	3%
Vomiting	<1%	<1%	2%

Most Frequent Adverse Clinical Events Seen in Association with the Use of ARICEPT® The most common adverse events, defined as those occurring at a frequency of at least 5% in patients receiving 10 mg/day and twice the placebo rate, are largely predicted by ARICEPT®'s cholinomimetic effects. These include nausea, diarrhea, insomnia, vomiting, muscle cramp, fatigue and anorexia. These adverse events were often of mild intensity and transient, resolving during continued ARICEPT® treatment without the need for dose modification. There is evidence to suggest that the frequency of these common adverse events may be affected by the rate of titration. An open-label study was conducted with 269 patients who received placebo in the 15- and 30-week studies. These patients were titrated to a dose of 10 mg/day over a 6-week period. The rates of common adverse events were lower than those seen in patients titrated to 10 mg/day over one week in the controlled clinical trials and were comparable to those seen in patients on 5 mg/day. See Table 2 for a comparison of the most common adverse events following one and six week titration regimens.

Table 2. Comparison of Rates of Adverse Events in Patients Titrated to 10 mg/day Over 1 and 6 Weeks

	No titration		One-week titration	Six-week titration
Adverse Event	**Placebo (n=315)**	**5 mg/day (n=311)**	**10 mg/day (n=315)**	**10 mg/day (n=269)**
Nausea	6%	5%	19%	6%
Diarrhea	5%	8%	15%	9%
Insomnia	6%	6%	14%	6%
Fatigue	3%	4%	8%	3%
Vomiting	3%	3%	8%	5%
Muscle cramps	2%	6%	8%	3%
Anorexia	2%	3%	7%	3%

Adverse Events Reported in Controlled Trials The events cited reflect experience gained under closely monitored conditions of clinical trials in a highly selected patient population. In actual clinical practice or in other clinical trials, these frequency estimates may not apply, as the conditions of use, reporting behavior, and the kinds of patients treated may differ. Table 3 lists treatment emergent signs and symptoms that were reported in at least 2% of patients in placebo-controlled trials who received ARICEPT® and for which the rate of occurrence was greater for ARICEPT® assigned than placebo assigned patients. In general, adverse events occurred more frequently in female patients and with advancing age.

Table 3. Adverse Events Reported in Controlled Clinical Trials in at Least 2% of Patients Receiving ARICEPT® (donepezil HCl) and at a Higher Frequency than Placebo-treated Patients

Body System/Adverse Event	Placebo (n=355)	ARICEPT® (n=747)
Percent of Patients with any Adverse Event	**72**	**74**
Body as a Whole		
Headache	9	10
Pain, various locations	8	9
Accident	6	7
Fatigue	3	5
Cardiovascular System		
Syncope	1	2
Digestive System		
Nausea	6	11
Diarrhea	5	10
Vomiting	3	5
Anorexia	2	4
Hemic and Lymphatic System		
Ecchymosis	3	4
Metabolic and Nutritional Systems		
Weight Decrease	1	3
Musculoskeletal System		
Muscle Cramps	2	6
Arthritis	1	2
Nervous System		
Insomnia	6	9
Dizziness	6	8
Depression	<1	3
Abnormal Dreams	0	3
Somnolence	<1	2
Urogenital System		
Frequent Urination	1	2

Other Adverse Events Observed During Clinical Trials ARICEPT® has been administered to over 1700 individuals during clinical trials worldwide. Approximately 1200 of these patients have been treated for at least 3 months and more than 1000 patients have been treated for at least 6 months. Controlled and uncontrolled trials in the United States included approximately 900 patients. In regards to the highest dose of 10 mg/day, this population includes 650 patients treated for 3 months, 475 patients treated for 6 months and 116 patients treated for over 1 year. The range of patient exposure is from 1 to 1214 days. Treatment emergent signs and symptoms that occurred during 3 controlled clinical trials and two open-label trials in the United States were recorded as adverse events by the clinical investigators using terminology of their own choosing. To provide an overall estimate of the proportion of individuals having similar types of events, the events were grouped into a smaller number of standardized categories using a modified COSTART dictionary and event frequencies were calculated across all studies. These categories are used in the listing below. The frequencies represent the proportion of 900 patients from these trials who experienced that event while receiving ARICEPT®. All adverse events occurring at least twice are included, except for those already listed in Tables 2 or 3, COSTART terms too general to be informative, or events less likely to be drug caused. Events are classified by body system and listed using the following definitions: *frequent adverse events*—those occurring in at least 1/100 patients; *infrequent adverse events*—those occurring in 1/100 to 1/1000 patients. These adverse events are not necessarily related to ARICEPT® treatment and in most cases were observed at a similar frequency in placebo-treated patients in the controlled studies. No important additional adverse events were seen in studies conducted outside the United States. **Body as a Whole:** *Frequent:* influenza, chest pain, toothache; *Infrequent:* fever, edema face, periorbital edema, hernia hiatal, abscess, cellulitis, chills, generalized coldness, head fullness, listlessness. **Cardiovascular System:** *Frequent:* hypertension, vasodilation, atrial fibrillation, hot flashes, hypotension; *Infrequent:* angina pectoris, postural hypotension, myocardial infarction, AV block (first degree), congestive heart failure, arteritis, bradycardia, peripheral vascular disease, supraventricular tachycardia, deep vein thrombosis. **Digestive System:** *Frequent:* fecal incontinence, gastrointestinal bleeding, bloating, epigastric pain; *Infrequent:* eructation, gingivitis, increased appetite, flatulence, periodontal abscess, cholelithiasis, diverticulitis, drooling, dry mouth, fever sore, gastritis, irritable colon, tongue edema, epigastric distress, gastroenteritis, increased transaminases, hemorrhoids, ileus, increased thirst, jaundice, melena, polydipsia, duodenal ulcer, stomach ulcer. **Endocrine System:** *Infrequent:* diabetes mellitus, goiter. **Hemic and Lymphatic System:** *Infrequent:* anemia, thrombocythemia, thrombocytopenia, eosinophilia, erythrocytopenia. **Metabolic and Nutritional Disorders:** *Frequent:* dehydration; *Infrequent:* gout, hypokalemia, increased creatine kinase, hyperglycemia, weight increase, increased lactate dehydrogenase. **Musculoskeletal System:** *Frequent:* bone fracture; *Infrequent:* muscle weakness, muscle fasciculation. **Nervous System:** *Frequent:* delusions, tremor, irritability, paresthesia, aggression, vertigo, ataxia, increased libido, restlessness, abnormal crying, nervousness, aphasia; *Infrequent:* cerebrovascular accident, intracranial hemorrhage, transient ischemic attack, emotional lability, neuralgia, coldness (localized), muscle spasm, dysphoria, gait abnormality, hypertonia, hypokinesia, neurodermatitis, numbness (localized), paranoia, dysarthria, dysphasia, hostility, decreased libido, melancholia, emotional withdrawal, nystagmus, pacing. **Respiratory System:** *Frequent:* dyspnea, sore throat, bronchitis; *Infrequent:* epistaxis, post nasal drip, pneumonia, hyperventilation, pulmonary congestion, wheezing, hypoxia, pharyngitis, pleurisy, pulmonary collapse, sleep apnea, snoring. **Skin and Appendages:** *Frequent:* pruritus, diaphoresis, urticaria; *Infrequent:* dermatitis, erythema, skin discoloration, hyperkeratosis, alopecia, fungal dermatitis, herpes zoster, hirsutism, skin striae, night sweats, skin ulcer. **Special Senses:** *Frequent:* cataract, eye irritation, vision blurred; *Infrequent:* dry eyes, glaucoma, earache, tinnitus, blepharitis, decreased hearing, retinal hemorrhage, otitis externa, otitis media, bad taste, conjunctival hemorrhage, ear buzzing, motion sickness, spots before eyes. **Urogenital System:** *Frequent:* urinary incontinence, nocturia; *Infrequent:* dysuria, hematuria, urinary urgency, metrorrhagia, cystitis, enuresis, prostate hypertrophy, pyelonephritis, inability to empty bladder, breast fibroadenosis, fibrocystic breast, mastitis, pyuria, renal failure, vaginitis. **Postintroduction Reports** Voluntary reports of adverse events temporally associated with ARICEPT® that have been received since market introduction that are not listed above, and that there is inadequate data to determine the causal relationship with the drug include the following: abdominal pain, agitation, cholecystitis, confusion, convulsions, hallucinations, heart block (all types), hemolytic anemia, hepatitis, hyponatremia, neuroleptic malignant syndrome, pancreatitis, and rash. **OVERDOSAGE Because strategies for the management of overdose are continually evolving, it is advisable to contact a Poison Control Center to determine the latest recommendations for the management of an overdose of any drug.** As in any case of overdose, general supportive measures should be utilized. Overdosage with cholinesterase inhibitors can result in cholinergic crisis characterized by severe nausea, vomiting, salivation, sweating, bradycardia, hypotension, respiratory depression, collapse and convulsions. Increasing muscle weakness is a possibility and may result in death if respiratory muscles are involved. Tertiary anticholinergics such as atropine may be used as an antidote for ARICEPT® overdosage. Intravenous atropine sulfate titrated to effect is recommended: an initial dose of 1.0 to 2.0 mg IV with subsequent doses based upon clinical response. Atypical responses in blood pressure and heart rate have been reported with other cholinomimetics when co-administered with quaternary anticholinergics such as glycopyrrolate. It is not known whether ARICEPT® and/or its metabolites can be removed by dialysis (hemodialysis, peritoneal dialysis, or hemofiltration). Dose-related signs of toxicity in animals included reduced spontaneous movement, prone position, staggering gait, lacrimation, clonic convulsions, depressed respiration, salivation, miosis, tremors, fasciculation and lower body surface temperature. **DOSAGE AND ADMINISTRATION** The dosages of ARICEPT® shown to be effective in controlled clinical trials are 5 mg and 10 mg administered once per day. The higher dose of 10 mg did not provide a statistically significantly greater clinical benefit than 5 mg. There is a suggestion, however, based upon order of group mean scores and dose trend analyses of data from these clinical trials, that a daily dose of 10 mg of ARICEPT® might provide additional benefit for some patients. Accordingly, whether or not to employ a dose of 10 mg is a matter of prescriber and patient preference. Evidence from the controlled trials indicates that the 10 mg dose, with a one week titration, is likely to be associated with a higher incidence of cholinergic adverse events than the 5 mg dose. In open label trials using a 6 week titration, the frequency of these same adverse events was similar between the 5 mg and 10 mg dose groups. Therefore, because steady state is not achieved for 15 days and because the incidence of untoward effects may be influenced by the rate of dose escalation, treatment with a dose of 10 mg should not be contemplated until patients have been on a daily dose of 5 mg for 4 to 6 weeks. ARICEPT® should be taken in the evening, just prior to retiring, and may be taken with or without food.

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New York, NY 10017

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POINTS OF INTEREST

Gods and Moguls

AFTER THE EVENTS OF SEPTEMBER 11, EVEN HISTORICAL FICTION TAKES ON NEW MEANING. JUST ASK TED TURNER

BY STEPHANIE MANSFIELD

A role of "historical importance is every actor's dream," says Bo Brinkman (mounted, left, with Robert Duvall as Robert E. Lee).

VAN REDIN/TED TURNER PICTURES

EVEN STANDING NOSE-TO-NOSE, Ted Turner addresses you as if you're in the next county. "It's a *silly* thing for young men and old men to kill each *other*," he trumpets, with his odd inflections. "You don't see many *women* doing it. They're too *smart*." His snowy mustache quivers. "That's why I like women better than *men*." Then, a raucous cackle. "Ha ha ha. That's *one* of the reasons."

Over the pop-pop-pop of crackling muskets across a cornfield where 500 Civil War reenactors play out the Battle of Fredericksburg and special effects machines send up clouds of puffy white smoke, Turner's voice booms. And on the rural Maryland set of his testosterone-charged $54 million Civil War epic, *Gods and Generals*, the founder of CNN and Ted Turner Pictures, which is bankrolling the movie, seems to tower over director Ron Maxwell, actors Robert Duvall (as Robert E. Lee) and Stephen Lang (as "Stonewall" Jackson).

Everything about Turner (net worth: $6 billion) is oversize. His knee-high boots, his trailer, his $20 million, 68-foot "long-range" business jet parked nearby. "It's a Challenger," his companion Frederique D'arragon offers. (She's not big, but she has a big French accent and plump auburn curls caressing the lush fur collar of her black jacket.) Even the gold-handled tasseled sword hanging from the side of Turner's scratchy gray wool jacket seems bigger than the other actors', as if it came from the prop closet marked "gods," not "generals."

Turner's part, however, is tiny. (His character, Col. Waller Patton, has only one line of dialogue.) Before taking his place on the set, he kisses

Frederique on the lips. "Good-bye," he says to her. "Wait for me. I'm off to the front."

"Rolling . . . Action," yells director Maxwell through a battery-charged megaphone.

"Cell phones off, please," the director bellows. "And no flash cameras." (The accessory du jour of the appropriately whiskered reenactors is not a circa 1862 canteen, cartridge box or ten-pound Enfield musket rifle but palm-size point-and-shoot cameras.)

The scene is an exterior of the Confederate Army's winter quarters, where battle-weary soldiers are enjoying a musical revue put on by a minstrel band, made up of members of the Texas brigade, on a makeshift stage. There's a banjo, a few guitars and a comely wench in a hoopskirt who leads the troops in singing "Bonny Blue Flag." Turner delivers his line with gusto: "We owe your Texas boys a debt of gratitude for putting on these shows." The reenactors hoot and holler. Turner claps high and hard, as if he's watching an Atlanta Braves game.

Slated for a fall 2002 release, *Gods and Generals* follows on the success of *Gettysburg*, a feature movie and a four-hour TNT television miniseries also directed by Maxwell (based on the late Michael Shaara's Pulitzer Prize-winning *Killer Angels*). After Shaara died in May 1988, the director suggested that Shaara's son Jeff, then a rare-coin dealer, continue his father's story. Jeff had never thought of himself as a writer, but Maxwell convinced him to give it a try after reading a moving letter from him. Today, Shaara is costumed for his cameo as a major in the Texas brigade. Robert E. Lee IV is also visiting today, though he is not one of the many celebrity walk-ons in the film. These include Senators Phil Gramm, George Allen and Robert Byrd, who plays an adjutant to Lee and who celebrated his 84th birthday on the set.

More than 7,500 reenactors applied—many via e-mail to the film's Web site—to re-create the battles of Manassas I, Antietam, Chancellorsville and Fredericksburg, the largest in the film, which in actuality saw 12,000 casualties.

"If you're looking for heroes," Turner says, eyeing the troops, "there's plenty of them here."

In his new film, Ted Turner reprises the character he played in *Gettysburg*: Confederate Col. Waller Patton.

"If you're looking for heroes," Turner says, eyeing the gray and blue figures, "there's plenty of them here." The crew was on location on a farm south of Staunton, Virginia, when they heard the grim news of September 11. Shooting was suspended. A minister was brought to the set, and later some of the cast and crew attended church services, the reenactors' faces still caked with stage blood and jackets torn by bullet holes.

"Every speech rings true, even more after September 11," says actor Jeff Daniels, who portrays Col. Joshua Chamberlain. "It speaks to what we're defending. These guys were defending it 100 years after Washington made it happen."

"We have a lot of scenes of loved ones parting," says actor Bruce Boxleitner (Gen. James Longstreet). "[The Civil War] was an era when America was ripped apart by the most horrendous situation, and yet we put ourselves back together and were stronger. The message is: no matter what we face, we can get through it."

"When I was a kid, patriotism was very out of vogue," says Jeff Shaara, 49, who was 4-F during the Vietnam War. "Now there's an obvious resurgence, and it's not mindless. It's a sense of 'Who are we?' People want to feel good about the country again. For a long time, people of our generation didn't. My grandfather had an 'America: Love It or Leave It' bumper sticker. I was mortified."

"It's about partings and farewells, and reunions and the real nitty-gritty elemental stuff of life," says Maxwell, 55, a conscientious objector during Vietnam. "We filmed scenes like that when all this was happening across America. Husbands and wives going off to Afghanistan. It was doubly emotional for us. Doubly poignant. This love of country has always been there. It's either been latent, repressed or denied. And the proof was September 11. You cannot create something that was not in people's hearts to begin with."

With the White House and Hollywood joining forces to promote patriotic entertainment, *Gods and Generals* seems well-positioned to succeed at the box office. Of course, as screenwriter William Goldman famously observed about Hollywood: "Nobody knows anything." That includes Turner. "What am I, a soothsayer? I don't *know* what the mood of the country is going to be." Then, for the first time all day his voice quiets. "We're making a war movie to try and get people not to like war," he says, walking to his trailer.

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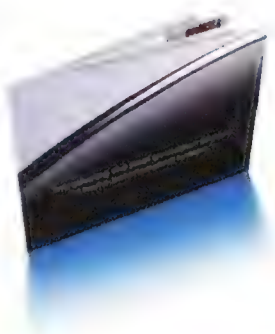

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The annual Venice Carnival, held in February, boasts a dizzying whirlwind of concerts, costume parades in Saint Mark's Square (captured by photographer Toni Anzenberger), masquerade balls and tours of the Grand Canal. For the occasion, writes Lisa St. Aubin de Terán, Venice "makes up her face like an ancient beauty, aware of her fine bones, but worried about her wrinkles."

PEOPLE FILE

Virus Vanquisher

D. A. HENDERSON LED THE GLOBAL CAMPAIGN TO ERADICATE SMALLPOX; NOW HE'S WORKING AGAINST ITS RETURN

BY J. D. REED

"Smallpox," says Henderson (at home with mostly African artifacts), "is the real gorilla."

ALL: REGIS LEFEBURE

AT 3 P.M. ON THE SUNDAY FOLLOWing September 11, the telephone rang in D. A. Henderson's spacious Baltimore home. It was the office of Health and Human Services (HHS) Secretary Tommy G. Thompson inviting him to a 7 P.M. meeting. "Fine," answered Henderson, thumbing his calendar. "What day?" "*Today!*" came the terse reply.

After all, Donald Ainslie Henderson, known as D. A., had masterminded the 11-year effort that successfully wiped out the scourge of smallpox from the globe in the late 1970s. "D. A. is one of history's great leaders," says Dr. Lawrence Brilliant, a San Francisco public health and technology specialist who worked for Henderson vaccinating thousands in India. "No one has ever eradicated a disease before or since. It is one of history's greatest achievements."

Nearly a quarter-century later, Henderson, a physician and professor of public health at Johns Hopkins University, possesses a vitality that belies his 73 years. "I watched TV on September 11 in utter horror," he says in a resonant baritone. "But it didn't hit me until a few days later that these terrorists were very well organized and were ready to ignore any moral values to kill as many people as possible. I thought, 'What could they do next?' Then I thought, 'Oh, my God.'"

As head of HHS's newly created Office of Public Health Preparedness, Henderson's mandate is to help come up with a plan to defend against a biological attack on the United States. To succeed he will have to orchestrate a bureaucratic opera of government agencies, medical professionals, public health workers and communications experts. Admirers say he can do it. "He has enormous credibility," says Jonathan B. Tucker, a biological and chemical weapons expert and the author of *Scourge: The Once and Future Threat of Smallpox*. "He has a remarkable ability to cut through bureaucratic tangles."

In fact, avoiding a bureaucracy—the U.S. Army—had a lot to do with the man Henderson would become. Growing up in a suburb of Cleveland, Ohio, he aspired to be a physician, not an engineer like his Scottish Presbyterian father. At Oberlin College he and his roommate started a radio station; to get around the college prohibition against cars, Henderson convinced school authorities that his 1937 Oldsmobile was the official station vehicle.

After medical school at the University of Rochester and a yearlong internship at a Cooperstown, New York, hospital, Henderson was tapped in 1955 by his draft board. "I didn't want to spend two years doing induction physicals," he recalls, so when the U.S. Public Health Service's Communicable Disease Center (CDC), now the Centers for Disease Control and Prevention, offered him a two-year stint tracking outbreaks of disease for the Epidemic Intelligence Service (EIS), he jumped. "I wasn't particularly interested in infectious diseases," Henderson says. "On the other hand," he adds, smiling, "I didn't have to wear a uniform or salute."

Soon he was hooked on epidemiology. He took over the EIS, and along the way collected a master's degree in public health at Hopkins, then returned to the CDC in 1960. He had married his wife, Nana, an educator, in 1951, and they had three children. (Their daughter, Leigh, is an epi-

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demiologist, son David is a sculptor and the other son, Douglas, is a composer.)

In 1966, though the Cold War was raging, both the U.S. and the Soviet Union agreed to intensify the World Health Organization's (WHO) campaign to eradicate smallpox, and Henderson was chosen to head the effort. (He says WHO wanted a scapegoat.) "I had two career options," he says. "Go to Geneva [to take charge] or resign."

The task—to wipe out a disease that killed at least 300 million people in the past century alone—seemed impossible. The strategy devised—and still used today—is called surveillance and containment: when an outbreak is discovered, a ring of vaccinated people is formed around it, denying the disease any chance to spread.

For the scheme to work, every nation had to participate. But worried about cost, the health minister of Ethiopia declined to participate. Unbeknownst to the minister, Henderson flew there, met and befriended the personal physician of Emperor Haile Selassie and convinced the doctor of the program's worth. Ethiopia was soon on board.

Just before the last natural case of smallpox in the world occurred in 1977, Henderson moved on. He became dean of the Johns Hopkins' School of Public Health—a post he held until 1990, when he was selected by George Bush the elder to be the science adviser for life sciences—even though Henderson was a lifelong Democrat and his wife was then president of Planned Parenthood in Maryland. Three years later, he took a position as senior science adviser at HHS for two years.

Henderson's staff in Zaire gave this smallpox sculpture to him.

All along, he continued to advocate the destruction of laboratory stocks of smallpox virus held by the United States and Russia. Once they were gone, he believed, other countries would feel pressured to destroy their stockpiles. (The virus is not necessary for the production of vaccine, which is made from a less virulent relative.) Many of Henderson's colleagues, including Brilliant, disagree, believing that the virus is necessary to develop new vaccines and drugs. Even as concern grew that nations other than the superpowers had the virus, Henderson held fast, to no avail. George W. Bush's administration announced in November that it would not destroy the nation's remaining stockpiles. Says Henderson: "I am now employed by the government, so of course I fully support my government."

In 1995, two events turned the public health world upside down. In Japan, a religious cult released deadly sarin gas in the Tokyo subway. And Saddam Hussein's son-in-law defected with the news that Iraq was engaged in extensive bioweapons development. Then, in 1999, defector Ken Alibek, a former Soviet biowarfare scientist, published a book detailing the fact that, protestations to the contrary, the Soviet Union was cooking up smallpox in dozens of locations and preparing for its potential release by ICBMs. At the same time, thousands of Soviet lab workers, many of whom have now scattered, had learned how to work with bioagents and had the opportunity to smuggle out vials of these substances. "We know that Russia has smallpox," says Henderson. "And it's highly possible that Iraq, North Korea and several other countries also have it. All you need is a vial the size of my little finger to get started. The rule of thumb is that if they're fiddling with nukes and chemicals, they're probably fooling around with bioweapons."

That likelihood has Henderson putting in marathon days at his spartan HHS office, though he still maintains that a release of smallpox by terrorists has a low level of probability. "We need to plan, not panic," he says, adding that, "If we had to go tomorrow, we could deliver 77 million doses of vaccine." Henderson has helped accelerate the production of new vaccine so that 286 million doses, enough for every American, will be available in less than a year. But he maintains, along with most scientists, that wholesale vaccination is unwise. The mortality rate from the vaccine is three cases per million. Others will have severe, even crippling, reactions. (The immune-suppressed—anyone with HIV, AIDS or undergoing chemotherapy—should not be vaccinated.) Ring vaccination (containment), he says, is the answer.

Education is another priority. "In cases of nuclear or chemical events," says Henderson, "the dimensions of the problem are immediately apparent. But with biologics, there may be no sign of an attack for two weeks. Then people start showing up in ERs and at doctors' offices with a rash that no one has seen before. So we must get to the ER docs and infectious disease specialists so that they can recognize things like anthrax, plague and smallpox."

Henderson vows to stay the course. "What makes me mad is that the Soviets kept making this stuff in the '80s and '90s. They allowed the art and science of bioterrorism to arise. If they had controlled their stock, this would be a different world." One in which D. A. Henderson could return to his first love. "I want to be out in the field again," he says, "working on polio, malaria, AIDS and TB, getting vaccines to the Third World. There is so much to do."

Peggy Fleming, Olympic Gold Medalist and World Champion Figure Skater

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LIPITOR (atorvastatin calcium tablets) is a prescription drug used with diet to lower cholesterol. LIPITOR is not for everyone, including those with liver disease or possible liver problems, women who are nursing, pregnant, or may become pregnant. LIPITOR has not been shown to prevent heart disease or heart attacks.

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Please see additional important information on next page.

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Brief Summary of Prescribing Information

CONTRAINDICATIONS: Active liver disease or unexplained persistent elevations of serum transaminases. Hypersensitivity to any component of this medication. **Pregnancy and Lactation** — *Atherosclerosis is a chronic process and discontinuation of lipid-lowering drugs during pregnancy should have little impact on the outcome of long-term therapy of primary hypercholesterolemia.* Cholesterol and other products of cholesterol biosynthesis are essential components for fetal development (including synthesis of steroids and cell membranes). Since HMG-CoA reductase inhibitors decrease cholesterol synthesis and possibly the synthesis of other biologically active substances derived from cholesterol, they may cause fetal harm when administered to pregnant women. Therefore, HMG-CoA reductase inhibitors are contraindicated during pregnancy and in nursing mothers. ATORVASTATIN SHOULD BE ADMINISTERED TO WOMEN OF CHILDBEARING AGE ONLY WHEN SUCH PATIENTS ARE HIGHLY UNLIKELY TO CONCEIVE AND HAVE BEEN INFORMED OF THE POTENTIAL HAZARDS. *If the patient becomes pregnant while taking this drug, therapy should be discontinued and the patient apprised of the potential hazard to the fetus.*

WARNINGS: Liver Dysfunction — HMG-CoA reductase inhibitors, like some other lipid-lowering therapies, have been associated with biochemical abnormalities of liver function. **Persistent elevations (>3 times the upper limit of normal [ULN] occurring on 2 or more occasions) in serum transaminases occurred in 0.7% of patients who received atorvastatin in clinical trials. The incidence of these abnormalities was 0.2%, 0.2%, 0.6%, and 2.3% for 10, 20, 40, and 80 mg, respectively.** One patient in clinical trials developed jaundice. Increases in liver function tests (LFT) in other patients were not associated with jaundice or other clinical signs or symptoms. Upon dose reduction, drug interruption, or discontinuation, transaminase levels returned to or near pretreatment levels without sequelae. Eighteen of 30 patients with persistent LFT elevations continued treatment with a reduced dose of atorvastatin. **It is recommended that liver function tests be performed prior to and at 12 weeks following both the initiation of therapy and any elevation of dose, and periodically (eg, semiannually) thereafter.** Liver enzyme changes generally occur in the first 3 months of treatment with atorvastatin. Patients who develop increased transaminase levels should be monitored until the abnormalities resolve. Should an increase in ALT or AST of >3 times ULN persist, reduction of dose or withdrawal of atorvastatin is recommended. Atorvastatin should be used with caution in patients who consume substantial quantities of alcohol and/or have a history of liver disease. Active liver disease *or unexplained persistent transaminase elevations are contraindications to the use of atorvastatin* (see CONTRAINDICATIONS). **Skeletal Muscle — Rhabdomyolysis with acute renal failure secondary to myoglobinuria has been reported with other drugs in this class.** Uncomplicated myalgia has been reported in atorvastatin-treated patients (see ADVERSE REACTIONS). Myopathy, defined as muscle aches or muscle weakness in conjunction with increases in creatine phosphokinase (CPK) values >10 times ULN, should be considered in any patient with diffuse myalgias, muscle tenderness or weakness, and/or marked elevation of CPK. Patients should be advised to report promptly unexplained muscle pain, tenderness or weakness, particularly if accompanied by malaise or fever. Atorvastatin therapy should be discontinued if markedly elevated CPK levels occur or myopathy is diagnosed or suspected. *The risk of myopathy during treatment with other drugs in this class is* increased with concurrent administration of cyclosporine, fibric acid derivatives, erythromycin, niacin, or azole antifungals. Physicians considering combined therapy with atorvastatin and fibric acid derivatives, erythromycin, immunosuppressive drugs, azole antifungals, or lipid-lowering doses of niacin should carefully weigh the potential benefits and risks and should carefully monitor patients for any signs or symptoms of muscle pain, tenderness, or weakness, particularly during the initial months of therapy and during any periods of upward dosage titration of either drug. Periodic creatine phosphokinase (CPK) determinations may be considered in such situations, but there is no assurance that such monitoring will prevent the occurrence of severe myopathy. **Atorvastatin therapy should be temporarily withheld or discontinued in any patient with an acute, serious condition suggestive of a myopathy or having a risk factor predisposing to the development of renal failure secondary to rhabdomyolysis (eg, severe acute infection, hypotension, major surgery, trauma, severe metabolic, endocrine and electrolyte disorders, and uncontrolled seizures).**

PRECAUTIONS: General — Before instituting therapy with atorvastatin, an attempt should be made to control hypercholesterolemia with appropriate diet, exercise, and weight reduction in obese patients, and to treat other underlying medical problems (see INDICATIONS AND USAGE in full prescribing information). **Information for Patients** — Patients should be advised to report promptly unexplained muscle pain, tenderness, or weakness, particularly if accompanied by malaise or fever. **Drug Interactions** — *The risk of myopathy during treatment with other drugs of this class is increased with* concurrent administration of cyclosporine, fibric acid derivatives, niacin (nicotinic acid), erythromycin, azole antifungals (see WARNINGS, Skeletal Muscle). ***Antacid:*** When atorvastatin and Maalox® TC suspension were coadministered, plasma concentrations of atorvastatin decreased approximately 35%. However, LDL-C reduction was not altered. ***Antipyrine:*** Because atorvastatin does not affect the pharmacokinetics of antipyrine, interactions with other drugs metabolized via the same cytochrome isozymes are not expected. ***Colestipol:*** Plasma concentrations of atorvastatin decreased approximately 25% when colestipol and atorvastatin were coadministered. However, LDL-C reduction was greater when atorvastatin and colestipol were coadministered than when either drug was given alone. ***Cimetidine:*** Atorvastatin plasma concentrations and LDL-C reduction were not altered by coadministration of cimetidine. ***Digoxin:*** When multiple doses of atorvastatin and digoxin were coadministered, steady-state plasma digoxin concentrations increased by approximately 20%. Patients taking digoxin should be monitored appropriately. ***Erythromycin:*** In healthy individuals, plasma concentrations of atorvastatin increased approximately 40% with coadministration of atorvastatin and *erythromycin, a known inhibitor of cytochrome* P450 3A4 (see WARNINGS, Skeletal Muscle). ***Oral Contraceptives:*** Coadministration of atorvastatin and an oral contraceptive increased AUC values for norethindrone and ethinyl estradiol by approximately 30% and 20%. These increases should be considered when selecting an oral contraceptive for a woman taking atorvastatin. ***Warfarin:*** Atorvastatin had no clinically significant effect on prothrombin time when administered to patients receiving chronic warfarin treatment. **Endocrine Function** — HMG-CoA reductase inhibitors interfere with cholesterol synthesis and theoretically might blunt adrenal and/or gonadal steroid production. Clinical studies have shown that atorvastatin does not reduce basal plasma cortisol concentration or impair adrenal reserve. The effects of HMG-CoA reductase inhibitors on male fertility have not been studied in adequate numbers of patients. *The effects, if any, on the pituitary-gonadal axis in premenopausal* women are unknown. Caution should be exercised if an HMG-CoA reductase inhibitor is administered concomitantly with drugs that may decrease the levels or activity of endogenous steroid hormones, such as ketoconazole, spironolactone, and cimetidine. **CNS Toxicity** — Brain hemorrhage was seen in a female dog treated for 3 months at 120 mg/kg/day. Brain hemorrhage and optic nerve vacuolation were seen in another female dog that was sacrificed in moribund condition after 11 weeks of escalating doses up to 280 mg/kg/day. The 120 mg/kg dose resulted in a systemic exposure approximately 16 times the human plasma area-under-the-curve (AUC, 0-24 hours) based on the maximum human dose of 80 mg/day. A single tonic convulsion was seen in each of 2 male dogs (one treated at 10 mg/kg/day and one at 120 mg/kg/day) in a 2-year study. No CNS lesions have been observed in mice after chronic treatment for up to 2 years at doses up to 400 mg/kg/day or in rats at doses up to 100 mg/kg/day. These doses were 6 to 11 times (mouse) and 8 to 16 times (rat) the human AUC (0-24) based on the maximum recommended human dose of 80 mg/day. CNS vascular lesions, characterized by perivascular hemorrhages, edema, and mononuclear cell infiltration of perivascular *spaces, have been observed in dogs treated with other members of this class. A chemically similar* drug in this class produced optic nerve degeneration (Wallerian degeneration of retinogeniculate fibers) in clinically normal dogs in a dose-dependent fashion at a dose that produced plasma drug levels about 30 times higher than the mean drug level in humans taking the highest recommended dose. **Carcinogenesis, Mutagenesis, Impairment of Fertility** — In a 2-year carcinogenicity study in rats at dose levels of 10, 30, and 100 mg/kg/day, 2 rare tumors were found in muscle in high-dose females: in one, there was a rhabdomyosarcoma and, in another, there was a fibrosarcoma. This dose represents a plasma AUC (0-24) value of approximately 16 times the mean human plasma drug exposure after an 80 mg oral dose. A 2-year carcinogenicity study in mice given 100, 200, or 400 *mg/kg/day resulted in a significant increase in liver adenomas in high-dose males and liver carcinomas* in high-dose females. These findings occurred at plasma AUC (0-24) values of approximately 6 times the mean human plasma drug exposure after an 80 mg oral dose. *In vitro,* atorvastatin was not mutagenic or clastogenic in the following tests with and without metabolic activation: the Ames test with *Salmonella typhimurium* and *Escherichia coli,* the HGPRT forward mutation assay in Chinese hamster lung cells, and the chromosomal aberration assay in Chinese hamster lung cells. Atorvastatin was negative in the *in vivo* mouse micronucleus test. Studies in rats performed at doses up to 175 mg/kg (15 times the human exposure) produced no changes in fertility. There was aplasia and aspermia in the epididymis of 2 of 10 rats treated with 100 mg/kg/day of atorvastatin for 3 months (16 times the human AUC at the 80 mg dose); testis weights were significantly lower at 30 and 100 mg/kg and epididymal weight was lower at 100 mg/kg. Male rats given 100 mg/kg/day for 11 weeks prior to mating had decreased sperm motility, spermatid head concentration, and increased abnormal sperm. Atorvastatin caused no adverse effects on semen parameters, or reproductive organ histopathology in dogs given doses of 10, 40, or 120 mg/kg for two years. **Pregnancy — Pregnancy Category X: See CONTRAINDICATIONS.** Safety in pregnant women has not been established. Atorvastatin crosses the rat placenta and reaches a level in fetal liver equivalent to that of maternal plasma. Atorvastatin was not teratogenic in rats at doses up to 300 mg/kg/day or in rabbits at doses up to 100 mg/kg/day. These doses resulted in multiples of about 30 times (rat) or 20 times (rabbit) the human exposure based on surface area (mg/m^2). In a study in rats given 20, 100, or 225 mg/kg/day, from gestation day 7 through to lactation day 21 (weaning), there was decreased pup survival at birth, neonate, weaning, and maturity in pups of mothers dosed with 225 mg/kg/day. Body weight was decreased on days 4 and 21 in pups of mothers dosed at 100 mg/kg/day; pup body *weight was decreased at birth and at days 4, 21, and 91 at 225 mg/kg/day. Pup development was* delayed (rotorod performance at 100 mg/kg/day and acoustic startle at 225 mg/kg/day; pinnae detachment and eye opening at 225 mg/kg/day). These doses correspond to 6 times (100 mg/kg) and 22 times (225 mg/kg) the human AUC at 80 mg/day. Rare reports of congenital anomalies have been received following intrauterine exposure to HMG-CoA reductase inhibitors. There has been one report of severe congenital bony deformity, tracheo-esophageal fistula, and anal atresia (VATER association) in a baby born to a woman who took lovastatin with dextroamphetamine sulfate during the first trimester of pregnancy. LIPITOR should be administered to women of childbearing potential only when such patients are highly unlikely to conceive and have been informed of the potential hazards. *If the woman becomes pregnant while taking LIPITOR, it should be discontinued and the patient* advised again as to the potential hazards to the fetus. **Nursing Mothers** — Nursing rat pups had plasma and liver drug levels of 50% and 40%, respectively, of that in their mother's milk. Because of the potential for adverse reactions in nursing infants, women taking LIPITOR should not breast-feed (see CONTRAINDICATIONS). **Pediatric Use** — Treatment experience in a pediatric population is limited to doses of LIPITOR up to 80 mg/day for 1 year in 8 patients with homozygous FH. No clinical or biochemical abnormalities were reported in these patients. None of these patients was below 9 years of age. **Geriatric Use** — Treatment experience in adults age ≥70 years with doses of LIPITOR up to 80 mg/day has been evaluated in 221 patients. The safety and efficacy of LIPITOR in this population were similar to those of patients <70 years of age.

ADVERSE REACTIONS: LIPITOR is generally well-tolerated. Adverse reactions have usually been mild and transient. In controlled clinical studies of 2,502 patients, <2% of patients were discontinued due to adverse experiences attributable to atorvastatin. The most frequent adverse events thought to be related to atorvastatin were constipation, flatulence, dyspepsia, and abdominal pain. **Clinical Adverse Experiences** — Adverse experiences reported in ≥2% of patients in placebo-controlled clinical studies of atorvastatin, regardless of causality assessment, are shown in the following table.

Adverse Events in Placebo-Controlled Studies (% of Patients)

BODY SYSTEM Adverse Event	Placebo N = 270	Atorvastatin 10 mg N = 863	Atorvastatin 20 mg N = 36	Atorvastatin 40 mg N = 79	Atorvastatin 80 mg N = 94
BODY AS A WHOLE					
Infection	10.0	10.3	2.8	10.1	7.4
Headache	7.0	5.4	16.7	2.5	6.4
Accidental Injury	3.7	4.2	0.0	1.3	3.2
Flu Syndrome	1.9	2.2	0.0	2.5	3.2
Abdominal Pain	0.7	2.8	0.0	3.8	2.1
Back Pain	3.0	2.8	0.0	3.8	1.1
Allergic Reaction	2.6	0.9	2.8	1.3	0.0
Asthenia	1.9	2.2	0.0	3.8	0.0
DIGESTIVE SYSTEM					
Constipation	1.8	2.1	0.0	2.5	1.1
Diarrhea	1.5	2.7	0.0	3.8	5.3
Dyspepsia	4.1	2.3	2.8	1.3	2.1
Flatulence	3.3	2.1	2.8	1.3	1.1
RESPIRATORY SYSTEM					
Sinusitis	2.6	2.8	0.0	2.5	6.4
Pharyngitis	1.5	2.5	0.0	1.3	2.1
SKIN AND APPENDAGES					
Rash	0.7	3.9	2.8	3.8	1.1
MUSCULOSKELETAL SYSTEM					
Arthralgia	1.5	2.0	0.0	5.1	0.0
Myalgia	1.1	3.2	5.6	1.3	0.0

The following adverse events were reported, regardless of causality assessment in patients treated *with atorvastatin in clinical trials. The events in italics occurred in ≥2% of patients and the events in* plain type occurred in <2% of patients.

Body as a Whole: Chest pain, face edema, fever, neck rigidity, malaise, photosensitivity reaction, generalized edema. ***Digestive System:*** Nausea, gastroenteritis, liver function tests abnormal, colitis, vomiting, gastritis, dry mouth, rectal hemorrhage, esophagitis, eructation, glossitis, mouth ulceration, anorexia, increased appetite, stomatitis, biliary pain, cheilitis, duodenal ulcer, dysphagia, enteritis, melena, gum hemorrhage, stomach ulcer, tenesmus, ulcerative stomatitis, hepatitis, pancreatitis, cholestatic jaundice. ***Respiratory System:*** Bronchitis, rhinitis, pneumonia, dyspnea, asthma, epistaxis. ***Nervous System:*** Insomnia, dizziness, paresthesia, somnolence, amnesia, abnormal dreams, libido decreased, emotional lability, incoordination, peripheral neuropathy, torticollis, facial paralysis, hyperkinesia, depression, hypesthesia, hypertonia. ***Musculoskeletal System:*** Arthritis, leg cramps, bursitis, tenosynovitis, myasthenia, tendinous contracture, myositis. ***Skin and Appendages:*** Pruritus, contact dermatitis, alopecia, dry skin, sweating, acne, urticaria, eczema, seborrhea, skin ulcer. ***Urogenital System:*** Urinary tract infection, urinary frequency, cystitis, hematuria, impotence, dysuria, kidney calculus, nocturia, epididymitis, fibrocystic breast, vaginal hemorrhage, albuminuria, breast enlargement, metrorrhagia, nephritis, urinary incontinence, urinary retention, urinary urgency, abnormal ejaculation, uterine hemorrhage. ***Special Senses:*** Amblyopia, tinnitus, dry eyes, refraction disorder, eye hemorrhage, deafness, glaucoma, parosmia, taste loss, taste perversion. ***Cardiovascular System:*** *Palpitation, vasodilatation, syncope, migraine, postural hypotension, phlebitis, arrhythmia, angina pectoris,* hypertension. ***Metabolic and Nutritional Disorders:*** Peripheral edema, hyperglycemia, creatine phosphokinase increased, gout, weight gain, hypoglycemia. ***Hemic and Lymphatic System:*** Ecchymosis, anemia, lymphadenopathy, thrombocytopenia, petechia. ***Postintroduction Reports*** — Adverse events associated with LIPITOR therapy reported since market introduction, that are not listed above, regardless of causality assessment, include the following: anaphylaxis, angioneurotic edema, bullous rashes (including erythema multiforme, Stevens-Johnson syndrome, and toxic epidermal necrolysis), and rhabdomyolysis.

OVERDOSAGE: There is no specific treatment for atorvastatin overdosage. In the event of an overdose, the patient should be treated symptomatically, and supportive measures instituted as required. Due to extensive drug binding to plasma proteins, hemodialysis is not expected to significantly enhance atorvastatin clearance.

This summary provides important information about Lipitor. For more information, please ask your doctor, pharmacist or healthcare professional to provide the professional labeling and then discuss it with them.

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JESSIE COHEN/SI

Prized Pachyderm

RACHEL MORELAND WAS WORRIED. THE Smithsonian animal researcher had gone to the Baltimore-Washington International Airport one day nearly two years ago to pick up a sperm sample donated by an elephant in Ontario, Canada, but the package could not be found. After a three-hour search, the must-keep-cool parcel turned up (it was on a later flight), and the precious cargo, which is usually viable for only a day, was rushed to the National Zoo in Washington, D.C. There, a 24-year-old Asian elephant named Shanthi was artificially inseminated. Because female elephants are fertile for only three days every four months, timing is critical. The last of three expected shipments of donated sperm never arrived because of bad weather; zoo officials held their breath that the other two would do the trick. They did. Twelve weeks later an

AROUND THE MALL

ultrasound exam confirmed Shanthi's pregnancy. After a 22-month gestation—elephants have the longest of any mammal—and induced labor, Shanthi gave birth to a 325-pound male November 25.

Zoo staff, some of whom had left their Thanksgiving dinners mid-bite when alerted to the impending blessed event, cheered as the downy, pinkish calf tumbled to the floor. Just four minutes later, he took his first steps, walking unsteadily over to his mother.

Named Kandula, after the elephant of an ancient Sri Lankan king, he is only the fourth elephant born in the United States using artificial insemination and the fifth worldwide. With the number of births resulting from natural breeding in captivity at fewer than five annually, biologists look to artificial insemination to help maintain the elephant population in zoos. (Zoos curtailed importation of Asian elephants after 1976 when they were declared endangered.)

For more than 20 years biologists had attempted to artificially inseminate elephants. But success was very intermittent. In 1995 Janine Brown, a reproductive physiologist, and her team at the Smithsonian's Conservation and Research Center in Front Royal, Virginia, discovered a way to determine Shanthi's fertile periods by closely monitoring her ovulation hormone levels. "This was a serendipitous discovery," says Brown. "We were looking at something else—not that hormone."

The breakthrough, aided by a catheter specially designed by scientists at Germany's Institute for Zoo Biology and Wildlife Research, led to Shanthi's pregnancy as well as the pregnancies of four other elephants.

Since Kandula's arrival, doting zoo staff have given baby and mother round-the-clock attention. Much of their efforts have gone toward baby-proofing the elephants' quarters. Says elephant manager Marie Galloway: "He's all boy and into everything." —*Rebecca Maksel*

The Anacostia renovations should boost the monthly 3,000-visitor attendance rate.

A New Day Begun

A MAJOR FACE-LIFT HAS TURNED THE Anacostia Museum into a muscular building with drum-shaped columns, textured brick patterns and movie-premiere-style lighting. Located four miles from the National Mall in southeast Washington, D.C., the African-American museum has long enjoyed a reputation as the Smithsonian's little off-campus gem. But the 17-year-old building—a corrugated metal warehouse with a brick facade—possessed all the warmth of a bus depot. After a two-year, $8.3 million renovation, the museum reopens this month. "It's a new day begun," says Steven Newsome, the Anacostia's affable director, echoing a line from James Weldon Johnson's "Lift Ev'ry Voice and Sing," the African-American anthem of triumph over adversity. It does seem apt.

Designers created a postmodern industrial look for the museum's new offices.

The museum, located in a largely African-American neighborhood, got its start in 1967 as part of an effort to make the Smithsonian more accessible to the black community. Forced in 1985 to flee its quarters in a leased movie theater because of encroaching drug traffic, the Anacostia has been in a state of "becoming" for years, says Newsome. Now, he insists, it is poised to become "*the* leading organization in this country for the preservation and protection of African-American history and culture."

The new structure features a climate-controlled suite for conservation of the museum's 3,000 objects, modern heating and ventilation systems, wheelchair ramp, a research library, photo studio, community meeting room and a spacious patio. Adding 4,000 square feet to the original 22,000-square-foot building site allowed for the construction of a large foyer to accommodate bus groups that in the past had to congregate outside. Computerized special-effects lighting makes the most of two new

GREG HADLEY/WISNEWSKI BLAIR AND ASSOCIATES (2)

Camelot Lane
to
community center
to
first chair.

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small exhibition spaces that increase the number of galleries to four.

Over its 35-year history, the Anacostia has been recognized for such landmark programs as its 1996 exhibition about pre-Civil War Washington, its focus on African-American inventors in a popular 1990 show called "The Real McCoy" and a study of the cultural and political influence of black churches.

The new building's inaugural exhibition, "Precious Memories: Collectors' Passion," which opens February 11, will showcase African-American collectors and preservationists in the Washington, D.C. area. Some 160 items—photographs, original manuscripts and documents, such as letters from Frederick Douglass and a bill of sale for a slave purchased by Thomas Jefferson, a vintage wedding dress, sheet music from the Cotton Club and a 1896 school exercise book—document the African-American experience.

To reinforce the exhibition's message, the Anacostia offers ongoing workshops, school programs, and oral history projects emphasizing the importance of hanging on to grandma's handmade quilt or a grainy film of a family reunion. The museum aims to "capture, by any means necessary," says Newsome, "family history, community history, oral traditions, intangibles like cooking and holiday traditions, the gamut." —*Marilyn Milloy*

Child (on *Mister Rogers' Neighborhood*, 1974) calls the kitchen a place to "commune."

Julia's Kitchen

. . . SINK AND ALL

LIKE MANY SENIORS DOWNSIZING TO smaller quarters, Julia Child, 89, wondered what to do with a lifetime of possessions—especially those in her 14-by-20-foot kitchen. Like her famous poached fish, it was stuffed to the gills.

"I'm fully furnished out in Santa Barbara; I haven't room for anything," America's favorite "French" chef lamented in her distinctive warble about her relocation from Cambridge, Massachusetts, her home for more than 40 years, to a California retirement community.

Enter the Smithsonian's National Museum of American History, whose staff recently inventoried and trucked off to Washington, D.C. more than a thousand of Child's culinary items, including her six-burner Garland stove, Thermador wall oven, silver-bowled stand mixer and, yes, even her 1950s stainless steel kitchen sink. Beginning February 4, the museum plans to uncrate and catalog the wares in full view of the public in an exhibition-in-progress called "What's Cooking: Julia Child at the Smithsonian." A finished installation is expected later this year.

Calling her workplace an "old curiosity shop," Child says she could never resist a new tool or gadget, whether it be a German potato ricer, the latest fish scaler, soup stock defatters or rolling pins of every weight and size. "Anything new that comes along, I've tried." In 1993 she donated a whisk to the museum, as well as the industrial-size blowtorch she wielded so flamboyantly on some of her early television cooking shows, caramelizing crèmes brûlées and browning meringues. Since 1963, she's hosted seven different television cooking series, all for PBS, starting with *The French Chef*, through, most recently, *Julia and Jacques Cooking at Home* (with chef Jacques Pepin), which aired from 1999 to 2000.

The Smithsonian's decision to give Child and her kitchen a place in his-

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tory is "a great honor," she says. But hardly a surprising one. In addition to television, Child has written a dozen cookbooks, including the classic *Mastering the Art of French Cooking* and the ever-popular *French Chef*. And she's received hundreds of culinary awards and honors.

Child called her blue-and-green Cambridge kitchen "the beating heart of my home," but it was also the testing lab for thousands of recipes, the reception room for chefs from all over the world and the set for three TV series. Cooking on camera was tricky business. "I think we used 700 pounds of butter in one series because we had to redo things so much."

The kitchen was a little outsized. Child's husband, Paul, who died in 1994, raised the height of the countertops from the standard 36 inches to 38 inches, to make his 6-foot-2-inch wife more comfortable while she worked. It was only after marrying Paul in 1946 that Child became interested in cooking. Living in Paris during the late 1940s, where he worked for the U.S. Information Service, she attended Le Cordon Bleu, then, joining forces with two French chefs, opened L'Ecole des Trois Gourmandes. In 1961 the threesome published *Mastering the Art of French Cooking*, which recently came out in a 40th-anniversary edition with the recipe fat content unchanged. Child said she leaves it to the cook to "decide how much butter and cream to put in [a dish]. The important thing is the techniques."

Even though her kitchen is now being reassembled at the Smithsonian, Child is not about to hang up her apron. She will occasionally participate in cooking demonstrations in California. She confesses, however, that she is having a little trouble with the newfangled halogen-light oven in her Santa Barbara condo. The manufacturers "don't really have directions on how to bake a potato or roast a chicken," she says. "I'll be working on that." —*Margery Sellinger*

"It's pretty," says Child of her domain.

Visit the Smithsonian

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For a free Associates' planning packet, call Smithsonian Information, 202-357-2700 or 202-357-1729 (TTY), 9 A.M.-5 P.M., Monday-Friday; 10 A.M.-4 P.M., Saturday-Sunday, or send an e-mail to info@si.edu.

INFORMATION CENTER

Upon arrival, stop at the Smithsonian Information Center in the Castle (9 A.M.-5:30 P.M.). Most museums are open daily, 10 A.M.-5:30 P.M., except December 25. Members are invited to drop by the reception desk (9 A.M.-4 P.M.) to register for a behind-the-scenes tour and to hear about other membership benefits.

◀ HIGHLIGHT

Edward Hopper's *Cape Cod Morning* is one of more than 60 artworks in "Scenes of American Life," a Smithsonian American Art Museum exhibition at the Dayton Art Institute in Ohio until March 24. The show tours the nation through 2002.

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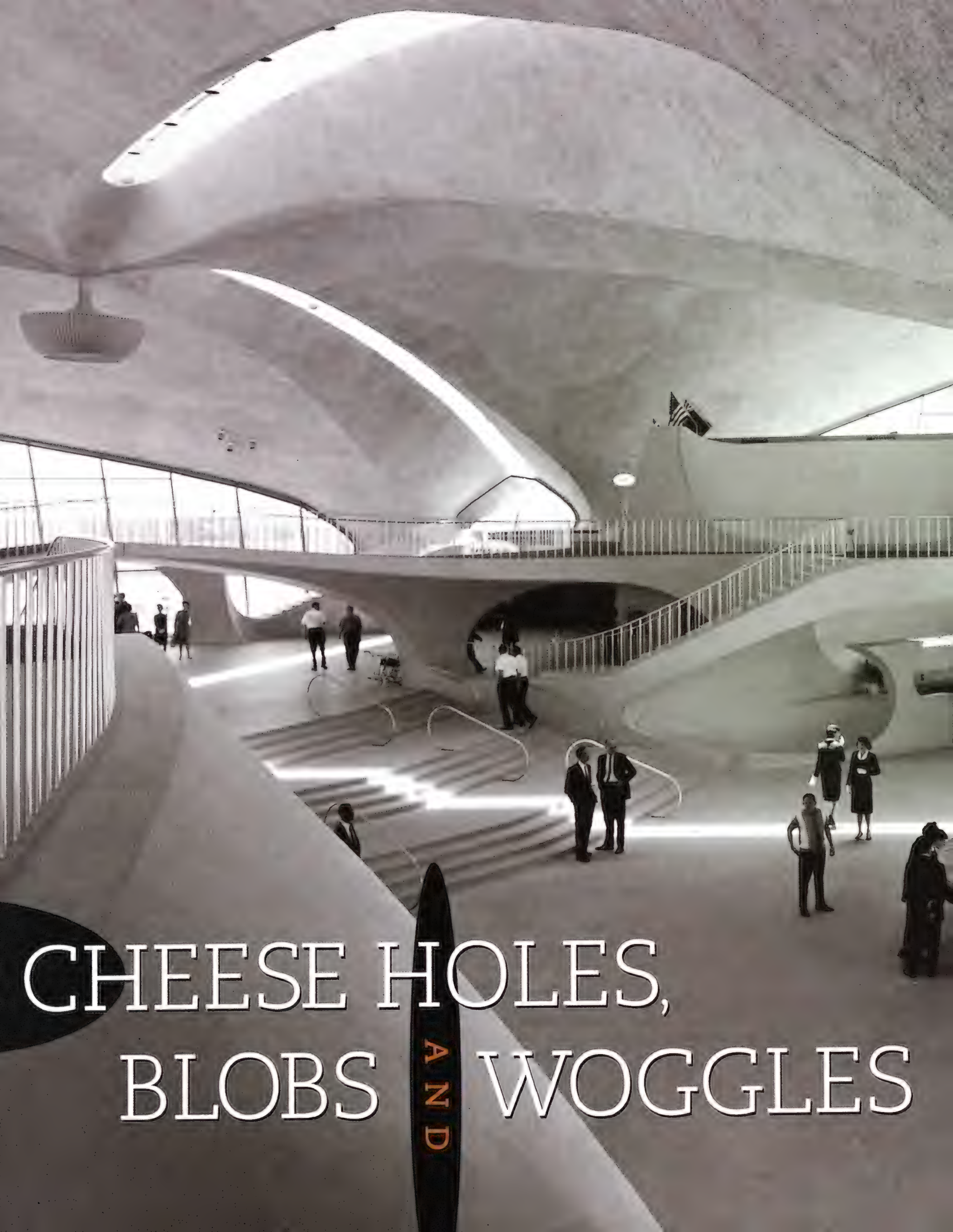
CHEESE HOLES,
BLOBS AND WOGGLES

FROM CADILLACS TO COFFEE TABLES, A NEW EXHIBITION EXPLORES THE INFLUENCE OF ORGANIC FORMS ON POSTWAR AMERICAN ART AND DESIGN

BY DOUG STEWART

WAR WAS HELL ON WOMEN'S FASHIONS IN THE early 1940s. Hemmed in by government restrictions that limited the fabric a manufacturer might use, U.S. garment makers had been offering American women mostly ruffle-free blouses, simple suits and spartan skirts. Thus in 1947, Paris couturier Christian Dior's billowing, calf-length outfits, with sculpted bodices that exaggerated a woman's natural curves, were a liberation. *Life* magazine dubbed his spring collection the "New Look," and as Dior himself later put it, he turned postwar women "into flowers, with soft shoulders, blooming bosoms, waists slim as vine stems, and skirts opening up like blossoms."

Dior's botanical metaphor suited the change in American tastes in art and design during the years following the war when many of the most innovative American artists and designers drew inspiration from nature. From bird-like airport roofs to amoeboid coffee tables, postwar designs appeared poised either to swoop or to ooze. The sensuous curves

The womblike, sculptural interior of Eero Saarinen's 1956-62 TWA Terminal at New York's Idlewild (now JFK) Airport (left)—an icon of postwar biomorphic architecture—echoes Isamu Noguchi's 1945 bronze *Figure* (above). The George Nelson *Ball* or *Atomic* Wall Clock was designed in 1947.

and irregular shapes of these biomorphic images, says Kevin Stayton, curator of decorative arts at the Brooklyn Museum of Art, "are a rejection of the hard-edged Machine Age forms of the 1920s and '30s, the skyscrapers and streamlined objects that celebrated the machine. The war didn't make the machine look like such a salvation after all. The new salvation—and the new threat—was biology and the atom."

More than 150 highlights from this rich vein of modernism—paintings, sculpture, photographs, furniture, ceramics, and such pop-culture artifacts as a vintage hula hoop, a pair of platform sandals in voluptuous red suede, and a sinuous 1940s Slinky—are featured in a major exhibition that goes on display at the Walker Art Center in Minneapolis from February 16 to May 12. Organized by the Brooklyn Museum of Art, where it opened last fall, "Vital Forms: American Art and Design in the Atomic Age, 1940-1960" will move on to the Frist Center for the Visual Arts in Nashville in June and later travel to San Diego and Phoenix. The show is accompanied by an illustrated catalog published by Harry N. Abrams.

Don't expect to see landscapes or flowers. "You could say this is about abstracted nature," says the show's cocurator, the Brooklyn Museum's Brooke Kamin Rapaport. Of course, the idea of

Philco's 1957-58 Predicta television set, with its pedestal and futuristic eye, bears an uncanny resemblance to Disneyland's 1957 Monsanto House of the Future.

incorporating natural forms into modern art had prewar antecedents. In the United States, Georgia O'Keeffe had been painting near-abstract works based on close-ups of flowers for decades, while European surrealists such as Jean Arp, Salvador Dalí and Joan Miró had populated their 1920s dreamscapes with weirdly distorted life-forms. Avant-garde artists fleeing Europe for America in the late 1930s and early '40s helped spur a vogue for organic imagery in the United States, especially in New York City, and foreshadowed a look that would become ubiquitous in 1950s pop culture.

Microscopes, with their revelations of endless worlds just beyond perception, were clearly one inspiration for many American artists of the 1940s. Painter Charles Seliger's 1944 *Cerebral Landscape* (p. 44) is a colorful thicket of sticky-looking cellular structures that seem to be reaching out to one another in a jubilantly morphing microworld. The same year, photographer Carlotta Corpron achieved a quieter, eerier version of abstracted nature in her *Eggs Encircled*.

Disillusioned by the war and its destruction, many artists in the mid-1940s used vital forms to limn a darker vision of the world. "This was a time of existential crisis," says Rapaport, "and a sense of anxiety and edginess comes through in much of the artwork of the period."

In paintings like Mark Rothko's 1944 *Entombment #1/The Entombment* and Adolph Gottlieb's

1946 *The Prisoners*, human figures appear disembodied or distorted. "In times of violence," Gottlieb once commented, "personal predilections for niceties of color and form seem irrelevant." In sculpture, Alexander Calder's stylized 1945 *Bayonets Menacing a Flower* is a graceful if heavy-handed cri de coeur, while *This Tortured Earth*, created in 1943 by Isamu Noguchi, is more abstract and more disturbing: a patch of ground portrayed in bronze as gouged and festering flesh.

While the modernists who used biomorphic forms might seem at first to be working in a very different vein from those who turned to Abstract Expressionism, both groups were seeking to strip art to its essence. And before they turned to pure abstractions, Rothko, Jackson Pollock and Barnett Newman all painted scenes that call to mind wriggling sea life, germinating seeds or amorphous protozoa. In paintings of the 1940s, amoeboid shapes recur in work after work. (Being utterly featureless, the amoeba seems to have been nature's gift to abstract art.)

In architecture, the cool, stripped-down International Style—championed by Europeans like Le Corbusier—was gaining fashion in the United States in the late 1940s and '50s. The great visionaries of mid-century American architecture, however—Finnish-born Eero Saarinen and the aging, eccentric Frank Lloyd Wright—were working in organic forms during this same period. Saarinen's TWA Terminal, in what is now New York's John F. Kennedy airport, has become a fixture of modern architecture. Designed in the late 1950s and completed in 1962, the terminal proclaimed the new glamour of jet travel: like a bird about to take flight, the structure is all vaulting curves and twists.

Frank Lloyd Wright's spiraling Solomon R. Guggenheim Museum in New York, completed in 1959, is another postwar landmark, though his "optimistic ziggurat," as he called it, was more controversial than Saarinen's terminal. Wright was a cantankerous critic of the International Style, deeming it soulless, and his Guggenheim was an unsubtle rebuke to the tyranny of the box, which by then had colonized most of Midtown Manhattan. The Guggenheim, wrote architectural historian Vincent Scully, was "a primitive drum beating in the heart of Fifth Avenue."

Suburban communities proliferated outside America's major cities after World War II. Many of the houses in them featured functional, eat-in kitchens with the latest in modern appliances and dishware. Eva Zeisel's whimsical salt and pepper set was made to fit the hand.

SEE P. 109 FOR ALL PICTURE CREDITS

Because of restrictions on metal during the war, sculptor Alexander Calder—noted for his mobile constructions of organic abstract forms—used aluminum from his sailboat to create such works as his 1947 *The Root* (right). With its implications of dark forces threatening the free-flowing, suspended "leaves," the piece reflects war's horrors. Charles Seliger's 1944 *Cerebral Landscape*, filled with living shapes, reveals the influence of European surrealism.

Some lesser-known pioneers were also battling the box. Though never built, John Johansen's 1955 "Spray Concrete House #2" resembled an aboveground cave. Johansen later said of his multilayered design: "I imagined the experience of living in a flower, swathed in its delicate protective petals, allowing between [them] glimpses of the outer world."

Alas, boxes are cheaper to build than vaults, spirals or domes, which is the main reason corporate America kept ordering them. "The free-form buildings of Saarinen and others were really for individual clients with specialized tastes," says architectural critic Martin Filler, a consulting curator to the "Vital Forms" show. Their design was more difficult, and construction more costly. Lacking today's high-powered computers and 3-D modeling software, Wright, Saarinen and others could only dream of designing a structure as daring and joyously convoluted as Frank Gehry's Guggenheim Museum in Bilbao, Spain.

Curves and twists are much easier to effect in smaller scale. Artist Sally Victor didn't face Wright's technical hurdles when she concocted her three-tiered Guggenheim Hat in 1960. Jewelry designer Margaret De Patta urged her peers to take risks with new materials and new techniques and to fashion pieces that offered "open forms, cantilever, floating structures and movement." With its exuberant asymmetry, her late-1940s brooch in silver, malachite and jasper is a timeless emblem of mid-century style. Art Smith's theatrical Lava Bracelet (more Lava Lamp than Mount Etna) and his Positive/Negative Neckpiece, with its echoes of Art Nouveau plant forms, are wearable sculptures. Smith, whose Greenwich Village studio was sought out by stage performers in the late 1940s, believed that "good jewelry literally caresses the body."

Indeed, the human body itself inspired the curves that animated many of the functional design objects of the

1940s and '50s. "The idea was to make objects that felt comfortable in the hand," says Kevin Stayton, the show's cocurator. "Since the hand is curved and pliable, the objects that fit best in it are going to be curved as well." The new approach was epitomized by Russel Wright's best-selling American Modern glazed-ceramic dinnerware, with shallow dimples that invite the thumb, and by the zoomorphic shapes of Eva Zeisel's popular Town and Country dinner service, whose witty, yet practical salt and pepper shakers appear to be snuggling.

Postwar furniture, too, became more body conscious. Innovative designers such as Charles and Ray Eames, Harry Bertoia and George Nelson experimented with new materials like molded plywood and fiberglass, developed during the war, to make chairs whose forms better fit the human body. The Eameses' classic "potato-chip" chairs, still in production today after 55 years, blended petallike compound curves and mass-producibility. Eero Saarinen intended his 1957 Tulip Chair (right, top), a fiberglass shell perched like a golf ball on a slender aluminum tee, "to clear up the slum of legs" that he felt blighted so many interiors, but the look never caught on.

Not all design in this period was as purposeful. While the movement to organic forms in the 1940s had begun as an earnest response to the impersonality of the machine, inevitably it shifted to a pursuit of style for its own sake. Just as streamlined cars of the 1930s begot streamlined staplers and refrigerators, now soft, amorphous shapes and fluid curves began turning up in sofas, lighting fixtures, necktie patterns and children's toys of the 1940s. "Form can take on a life of its own," says Stayton, "and that's not necessarily bad."

With Americans on a buying binge in the 1950s, ripe curves and look-at-me embellishments gave consumers the feeling they were getting extra value for their money. In the average new midline car of the decade, those extras included 44 pounds of chrome. General Motors' head stylist, Harley Earl, thought of his finned Cadillacs almost as animate objects. He tried to imbue them, he said in 1954, with "exactly the right attitude of level alertness, like an airplane at take-off." By the end of the decade, the ex-

Wallpaper designs, like this pattern with its lively plant and cell forms, joined the postwar party. Such trendy pieces as, from top, Eero Saarinen's 1957 Tulip Chair, Isamu Noguchi's 1944 Lounge Table, and 1950s "wasp-waisted" lighting fixtures furnished many a home.

Christian Dior's form-fitting 1947 Corolle line, known as the "New Look," began a postwar vogue for sculptural design. Ruth Adler Schnee's *Swizzles* printed fabric (background) adorned home furnishings of the 1950s. The August 1940 cover of *Harper's Bazaar* anticipated postwar graphic design. Margaret De Patta emphasized space and structure in her late 1940s brooch.

cesses were quite obvious. As the British design critic Reyner Banham observed, "While the Russians had been developing 'Sputnik,' the Americans had been debauching themselves with tailfins."

In their houses, popping up like dandelions in suburbs across the country, Americans wanted rooms that were upbeat, colorful, convenient and fun. The International Style may have taken over corporate architecture, but most Americans didn't want to go home to a machine for living (which was exactly what Le Corbusier argued a house should be).

Postwar Americans, a 1949 ad in *House and Garden* exulted, wanted furnishings that were "charming as youth itself . . . modern as this very moment" and "priced for the moderate incomes of bright young moderns who want livable, lovable homes." The exteriors might be drab and even interchangeable, but homeowners were choosing to appoint the interiors of their homes with drapes and wallpaper decorated with leaves and sliced lemons, Formica countertops replete with overlapping bananas, blobs and boomerangs, and floors of brightly patterned linoleum. Plastic, of course, made much of the "Contemporary Look" possible. Wartime engineers had synthesized tons of the stuff to substitute for metal and wood. The new plastics were extolled by the *New York Times* in 1943 as "indestructible." Not only did plastic answer the postwar yen for informal, colorful, lightweight products, but it also gave designers a material that practically begged for curves. The sleek 1953 Chevrolet Corvette, with its body of reinforced plastic, was a sensation, while Tupperware parties and hula hoop contests celebrated the injection-molded and extruded varieties of plastic. The "Vital Forms" exhibition includes several masterpieces of plastic product design, including Benjamin Bowden's 1959 futuristic Spacelander bicycle, with orblike voids in its frame, and a gorgeous 1946 AMI Model A jukebox in yellows, greens and pinks. "There was so much plastic on this that collectors call

it the 'Mother of Plastic' jukebox," says Brooke Rapaport.

Plastics reached some sort of apotheosis in 1957 with the Monsanto House of the Future, a four-way cantilevered affair that rose above Disneyland's Tomorrowland like a giant mushroom. Plastic inside and out, the place was outfitted with chairs by Nelson, Saarinen and the Eameses. Architects Richard Hamilton and Marvin Goody originally intended it as a modular, snap-together product. *Popular Science* predicted that owners who wished to remodel their plastic houses would cart their outdated wings to "a secondhand-wing lot." Although 20 million people trooped through the Monsanto House over its 11-year life span, it was too expensive and too altogether weird to attract a following. "It looks incredibly dated today," says critic Martin Filler. "It was clearly done for the company that produced the plastic it was made of."

Many of the organic designs that did catch the fancy of postwar Americans evoked comfort, pleasure, excitement and glitz, like a Las Vegas casino: looks with sex appeal. The most dizzying practitioner of this style was Morris Lapidus, designer of a string of 1950s Miami-area resort hotels including the Fontainebleau and the Americana. Drawing inspiration from Hollywood movies and the fantasy architecture of Coney Island, Lapidus favored sensuous flowing forms with dramatic lighting and textures. The Carioca Lounge of the Americana, with its zigzagging floor pattern and bar chairs with blobby cutouts, was like a stage set from outer space. Three recurring elements in Lapidus' work, none with any real function, were what he called the cheese hole (a back-lighted wall or ceiling cutout), the beanpole (which reached from floor to ceiling) and the woggle (a blob pattern that he used for dropped ceilings or carpets). During construction of the Fontainebleau, Lapidus predicted (accurately) that the critics weren't going to like it, but, as he wrote in his autobiog-

After the war, gas mask supplier Earl S. Tupper invented a method for turning polyethylene slag into a resilient, strong plastic. His colorful, airtight Tupperware containers are still sold at hostess-led parties. The free-form wooden bowl is by Russel Wright.

General Motors' 1953 Chevrolet Corvette was the brainchild of head stylist Harley Earl. The hugely successful sports car used innovative materials such as fiberglass and Plexiglas that had been key to the war effort. These facilitated the car's molded, organic shape.

raphy, *Too Much Is Never Enough*, "the critics were not going to be guests at the Fontainebleau." At its 1954 opening, police had to keep the crowds back.

Like Lapidus' cheese holes and woggles, certain shapes seem to distill the essence of mid-century style. Just as ancient builders and geometers sought the golden mean, postwar designers strove for the perfect boomerang (not too thick, not too thin), the just-so kidney, and variations on the hourglass, the artist's palette, the rounded rectangle, and especially the blob. Two early exemplars of amorphous beauty were Noguchi's 1944 Lounge Table, with its rounded triangular glass top, and Thomas Church's elegantly restrained 1948 Donnell Garden and Pool in Northern California, which helped set off a vogue in kidney-shaped pools from Palm Springs to Graceland.

The blob patterning of another much-copied artifact in the exhibition has become trendier today than ever—the World War II camouflage poncho. Indeed, the curvy asymmetry of the 1950s Contemporary Look, dismissed as hopelessly kitsch by the 1960s, is stylish once again—just check out the decor of your local Starbucks. And the best mass-produced furniture of the period has become as collectible as Chippendale. An original plywood Eames chair can fetch thousands at auction; a sofa, tens of thousands.

The 1950s have been called the Great Barbecue, but beneath the carefree surface lay an undercurrent of anxiety. The Bomb had replaced the war as the nightmare haunting America's domestic front. Fascination with scientific progress was offset by the Cold War's dueling H-Bomb tests and growing concerns about such worrisome issues as civil rights, juvenile delinquency, smog and radioactive fallout. The ambivalence of the period was summed up in a 1952 decorative-arts yearbook's observation that the modern age was "bouncing to the detonation of exploding atoms."

Several objects in the exhibition use atomic imagery as a design motif. The George Nelson 1947 *Ball* Wall Clock, conjuring up electrons in orbit, adorned many an Atomic Age kitchen wall. ("Suddenly it was decided by Mrs. America that this was the clock to put in your kitchen," Nelson recalled in a 1981 interview. "Why kitchen, I don't know.") More unsettling is Maurice Heaton's circa 1950 frosted-glass Amoeboid Plate, with its burst of gold streaks that radiate out from a central point, suggesting a sea creature crossed with a nuclear blast site.

Ominous in a different way, Philco's freestanding Predicta television of 1957-58 (an oversize green head on vestigial legs) seems ready to waddle toward the viewer. Like the Hollywood alien E.T., it is cute but creepy. Stayton finds the mixed message appropriate: "Like atomic science, which could lead to a cancer cure and annihilate the human race, here's this new medium, television, that's both changing our lives and invading our homes."

Then there was the blob—"the perfect expression of the ambivalence people felt during this period," Stayton says, "because it has the potential of turning into good or evil." The homicidal ectoplasm that slimed its way through the 1958 Steve McQueen movie *The Blob* and the oozy-looking aliens on science fiction comics of the time were the evil twins of Lapidus' friendly woggle.

A bizarre defense of the blob and its endlessly mutable ilk came in 1953 from *House Beautiful*, a leading arbiter of popular taste. The magazine warned that "the stark, sterile modern" look, square-cornered and colorless, could lull American consumers into accepting a styleless regimentation that smacked of life behind the Iron Curtain. "Liberty means choosing," the editors wrote. "We do not suspect political or ideological invasion of our homes by way of design or decoration. Yet it is indeed possible." Kidney-shaped coffee tables to the rescue! When a look becomes a bulwark against the international Communist conspiracy, you know it has entered the cultural mainstream.

Doug Stewart's article last month on New York's American Museum of Folk Art was his 50th feature for SMITHSONIAN.

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Attorney General A. Mitchell Palmer

BY BRUCE WATSON

WHEN BOMBS TERRORIZED AMERICA, THE ATTORNEY GENERAL LAUNCHED THE "PALMER RAIDS"

DURING THE MIDNIGHT HOURS of a placid June evening in 1919, homemade bombs shattered the silence across America. One explosion destroyed the home of Cleveland's mayor. Another damaged the house of a Massachusetts legislator. In Pittsburgh, two bombs went off within an hour of each other. Elsewhere, explosives ripped through a judge's house in Manhattan, a rectory in Philadelphia, and the home of a silk manufacturer in Paterson, New

In September 1920, an explosion rocked Wall Street, the last in a series of anarchist bombings that threw America into a panic.

All of America felt the hot breath of Bolshevism (here depicted in a newspaper cartoon) during the Red Scare of 1919 and 1920. In Boston (above) and across the nation, unionists, aliens and some who only looked suspicious were rounded up and jailed, in the Palmer Raids.

Jersey. Terrorism had come to America's own doorstep.

There had been terrorist attacks in the United States before, but nothing so coordinated and menacing. Most of the previous attacks were isolated bombings, conducted by self-proclaimed anarchists. This was different. During the latter half of 1919, the threat of terrorism sent Americans into a frenzy of fear.

The alarm first sounded just before May Day. On April 28, a long, thin parcel marked "Gimbel Brothers" was delivered to Seattle's mayor. When the package was opened, vials of sulfuric acid spilled out. Had the acid fallen on the package's three dynamite caps, the bomb would have delivered a more emphatic message. The next day, the maid of a former Georgia senator was not so lucky. When she opened a package meant for her employer, it blew off both of her hands.

Within days, postal authorities tracked down an additional 34 virtually identical mail bombs. Sixteen were sitting in a Manhattan post office, delayed by insufficient postage. Others reached their destinations but were intercepted before they could be opened. The list of targets read like *Who's Who in America*: John D. Rockefeller. J. P. Morgan. Supreme Court Justice Oliver Wendell Holmes.

America was a far different country than it had been before World War I. Millions of soldiers had recently returned to a country where jobs were few, political debate was hot and labor was on the march. "Currents of energy seemed [to be] breaking out everywhere as young guys climbed out of their uniforms," wrote John Dos Passos years later about the spring of 1919. "In every direction the countries of the world stretched out starving and angry, ready for anything turbulent." That year alone, there were 3,600 strikes. Most strikers sought nothing more than shorter hours and higher pay, yet their demands were linked to talk of worldwide revolution coming from the new Soviet Union.

On May Day, some parades dissolved into fistfights between labor leaders and veterans. And when a man refused to stand for the playing of the "Star-Spangled Banner" at a May 6 pageant in Washington, D.C., a sailor shot him three times, and the audience burst into applause.

On June 2, a bomb blew out the front door and windows of the three-story Washington town house belonging to newly appointed Attorney General A. Mitchell Palmer, a Quaker. Nineteen days later, federal agents stormed the offices of a socialist school in Manhattan. They found only a few bewildered men playing cards, but they seized lists of names and stacks of radical literature. At the nearby offices of the Industrial Workers of the World, agents burst in, sending some Wobblies, as members were called, scrambling out windows. Newspapers predicted a Communist-inspired reign of terror for July 4. Though not a single bombing or attack occurred, the Red Scare only

CULVER PICTURES; BETTMANN/CORBIS

grew. "Like a prairie-fire," wrote Palmer the next year, "the blaze of revolution was sweeping over every American institution of law and order."

During July, race riots in Washington, D.C. and Chicago were blamed on the "Reds." By late summer, the New York *World* made a "conservative estimate" that America had five million Bolsheviks, although actual membership in the fledgling Communist parties was about 70,000. A Boston police strike fanned the flames in September.

In August 1919, Palmer created the Justice Department's General Intelligence Division specifically to hunt radicals, left-wing groups and aliens. At its head, he put a tough, 24-year-old lawyer named J. Edgar Hoover.

More than two months later, on Armistice Day, veterans paraded past a Wobbly hall in Centralia, Washington. Wobblies opened fire. A melee ensued, and before it was over, four veterans lay dead. A mob then yanked a Wobbly out of jail, hanged him from a bridge and riddled his body with bullets. In several West Coast cities, mobs bent on eradicating the "Bolshevik menace" rounded up and beat innocent labor leaders. Incapacitated by a stroke, President Woodrow Wilson did nothing. But the press, public and Congress demanded that Palmer crack down. Finally, with Hoover coordinating the action, he did just that.

On November 7, federal agents raided offices of the Union of Russian Workers in 12 cities, rounding up 450 men and women. Some were, as the organization boasted, "atheists, communists, and anarchists" committed to overthrowing the American government. Most, however, were recent Russian immigrants looking for work. In custody, many were beaten and some were held without bail for five months. The press praised Palmer as a "tower of strength to his countrymen."

Palmer next invoked the wartime Espionage Act of 1917 and the Sedition Act of 1918, allowing him to deport, without a trial or hearing, any noncitizen who had ever belonged to a group deemed subversive. Just before Christmas, Palmer's men rounded up 249 resident aliens, including feminist and anarchist Emma Goldman, and packed them onto the Army transport *Buford*, which promptly sailed out of New York Harbor bound for the Soviet Union. Newspapers nicknamed it the Soviet Ark, and the Attorney General promised that other ships would soon depart. To fill them, he launched the biggest of the "Palmer Raids."

Louis Post, a 71-year-old official, challenged Palmer by canceling 1,500 deportations.

The day after New Year's 1920, federal agents conducted raids in 33 cities. Often without warrants, they burst into union halls, bowling alleys and private homes, arresting some 5,000 people. Many were thrown in isolated, unheated cells and left there for days. "Not for at least half a century, perhaps at no time in our history," writes historian William Leuchtenburg, "had there been such a wholesale violation of civil liberties." Only a few voices dissented.

One belonged to the 71-year-old Assistant Secretary of Labor, Louis F. Post, a man Palmer would underestimate. Reviewing the deportation orders for the masses of arrested aliens, Post saw not a Bolshevik menace but power unchecked by the rule of law. Post canceled more than 1,500 deportations and released nearly half of those in custody. (The person or persons who sent the June bombs were never discovered.) Palmer angrily demanded that Post be fired for his "tender solicitude for social revolution." The House of Representatives tried to impeach him, but his eloquent indictment of the Palmer Raids at a Congressional hearing not only swayed Congress but helped calm the nation. Still, the scare eventually inspired stricter immigration laws and galvanized the Ku Klux Klan.

As a contender for the Democratic Presidential ticket, Palmer predicted that May Day, 1920, would again be marred by bombs and violence. State governments mobilized militias, and New York City placed its entire 11,000-man police force on 24-hour alert. But May 1 passed without a single incident. Communist movements in Europe had stalled, and the things that would make the Twenties roar—Prohibition, radio and Babe Ruth—were beginning to capture the public's interest. The Democrats nominated James M. Cox for President.

By September, when a bomb exploded on Wall Street, killing 33 people, the tragedy was seen not as a conspiracy but as the work of a lone deranged bomber. The raids were over, and A. Mitchell Palmer, who only six months earlier had been a viable Presidential candidate, was remembered largely for lending his name to them. He died in obscurity in 1936.

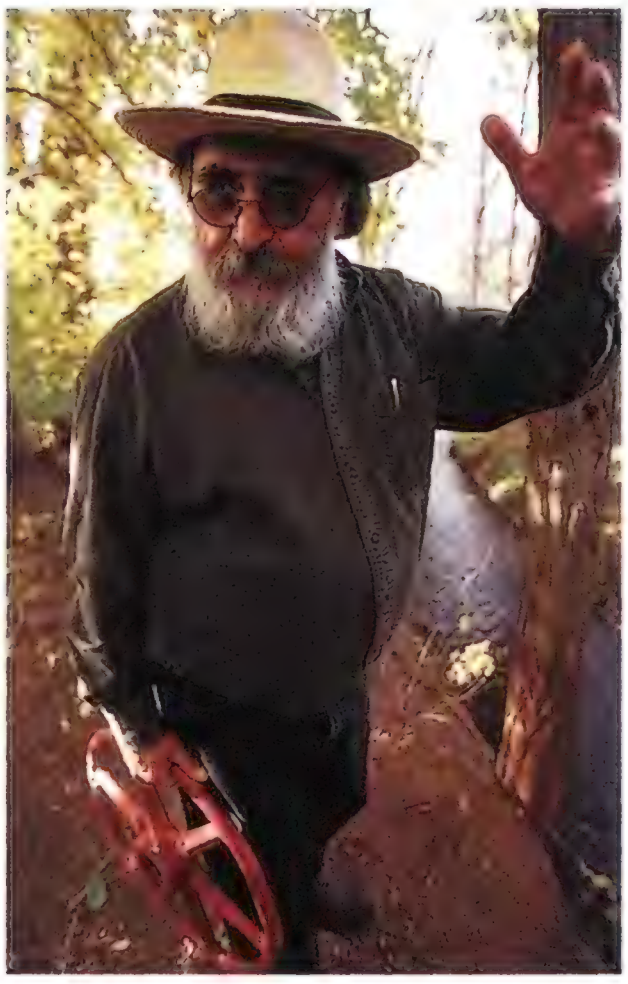
Bruce Watson wrote last about novelist Edgar Rice Burroughs, the creator of Tarzan.

BROWN BROTHERS; P. 50 CULVER PICTURES; P. 51 HULTON ARCHIVE/GETTY IMAGES

Digging Ditches

NARROW, HUMBLE IRRIGATION DITCHES CALLED ACEQUIAS SUSTAIN AN ENDANGERED WAY OF LIFE—BUT FOR HOW LONG?

BY BRUCE SELCRAIG



Local guardians, or mayordomos (such as Nicasio Romero, above) oversee acequias, which create oases wherever they flow. "You have to be a mediator, a counselor and a confidant," says Romero.

AGES AGO AS A COLLEGE KID I WAS HAPPILY DRIVING LOST through northern New Mexico's high sierra landscape of dirt-road villages and piñon-juniper forests when I saw an old farmer lying facedown beside a narrow irrigation ditch.

Unsure if I had stumbled upon a heart attack or siesta, I slowed down and shouted, "You all right?"

No answer.

"Sir, *está bien*?"

Slowly, he rolled over on his side and eyed me, bemused.

"Sorry," I replied awkwardly, feeling very gringo. "You looked dead—*muerto*."

"No, not yet young man," he replied with a laugh, brushing grass from his hat. "I was just napping. I like to listen to the acequia—the ditch. It's beautiful, no?"

I nodded politely. Beautiful? I knew ditches only as mosquito-infested flood-control channels around Houston, where I grew up, or as charmless concrete canals dissecting huge farms and ranches. But that afternoon, my first flirtation in a long romance with New Mexico water, I discerned something quite different.

Barely three feet wide and half that deep, full with numbingly cold snowmelt from 10,000-foot peaks in the distance, the gentle acequia (ah-SAKE-ya) rushed along grassy banks and hid beneath tall stands of venerable cottonwoods and lazy willows. Dug by shovels, not a seven-ton backhoe, the ditch meandered past backyard plots of beans, squash, chile peppers, apples and alfalfa, and splashed through creaking headgates and past the ubiquitous rusting Toyota pickups on blocks. So slender and overgrown by weeds that it was invisible from a distance, you could trace its course by the green ribbon of vegetation trailing it through the parched valley.

PHOTOGRAPHS BY GLENN OAKLEY

Many a mayordomo has received a panicked late-night call inquiring, "Where's my water?"

I admit, I was smitten by a ditch. Alas, it has been an unrequited affair because of my wife's reluctance to uproot the kids so that I, too, can take long naps in the sun and grow oddly shaped squash full-time. She's funny that way. But I still sneak out for brief flings, and this past summer I spent some time traveling acequia country, visiting with farmers, historians, activists, water merchants and, most of all, the mayordomos. They're the folks whose job it is to maintain the ditches, make sure all acequia users get their share of water and keep the peace among the ditch members, or *parciantes*, especially in times of drought.

For reasons both practical and sentimental, the families that maintain acequias are similarly smitten by ditches. Built by Spanish colonizers in the 17th and 18th centuries, acequias were once the lifelines of many rural Hispanic communities from Texas to California. But now they are dried up, or mere curiosities, everywhere but in northern New Mexico (plus a few places in southern Colorado), where more than a thousand still survive. In this proudly ethnic region, where every valley seems to have Apodacas, Montoyas and Martínezes who have farmed the same land since before the Civil War, acequias are community traditions, among the oldest public works projects in America. Their local governing commissions, also known as acequias, are perhaps the nation's oldest democratic institutions.

Once, the mayordomos who direct the ditches' maintenance were almost exclusively Hispanic men with flowing mustaches, full-time farmers in starched shirts who grew up on the ditches, walking in the footsteps of their fathers and grandfathers. Today, most mayordomos still have Spanish names and do at least some farming. But their ranks also include urban refugees from California, Anglo authors and poets, Hispanic activists and, despite the macho subculture, several women. It is an eclectic bunch that easily accommodates a man like Nicasio Romero.

Between Santa Fe and Las Vegas, New Mexico, in the floodplain of the Pecos River, Romero and his wife, Janet, a schoolteacher from New York, settled in the tiny village of El Ancon in 1972, paying $200 a year for a former hippie hangout with no plumbing and 30 acres. The youngest of eight kids and the first to graduate from high school, Romero picked cotton with his family near Roswell, New Mexico, as a migrant worker in the 1950s; then came college and a U.S. Army tour, during which he translated intercepted phone calls from Havana to Moscow for the National Security Agency.

"I got radicalized during the Vietnam War and moved to Berkeley," says Romero, whose mossy gray beard, round belly and dark oval sunglasses invoke departed rock icon Jerry Garcia. Later came a law school stint and a master's degree in art.

His sprawling yard amounted to a kind of sculpture zoo, filled with, among other things, whimsical iron baseball players and a ten-foot-tall adobe slab embedded with junked electronic devices. ("I put this one on 'pause,'" Romero says, brushing dirt from a tape recorder wedged in the slab, "so I called the piece, *Pause for the Millennium*.")

As he leads me through a damp orchard of October pears, black plums and grapes, his two dogs, Lucky and Rosie, splash through mud up ahead. Romero has opened the gate, or *sangría*, to his lateral ditch running parallel to the acequia so he can water a field of blue corn. The bitter drought

Water brokers (including Bill Turner) buy and sell the Southwest's most precious resource.

of two years ago has faded from memory, and these high desert farmers are giddy about their full ditches.

The El Ancon acequia still has old-timers on it who say they can judge the severity of a coming winter by the thickness of a stallion's coat. But these *viejos* are slowly being outnumbered by comfortable Anglos who can live almost anywhere—a former University of Chicago professor, a psychiatrist, a painter from Switzerland. Most live on rutted gravel roads, usually in remodeled adobe homes or newer self-built ones with metal roofs and fancy energy-saving features, several hundred yards back from the Pecos, whose waters are diverted for the ditch.

Like all acequias, the El Ancon ditch is gravity-fed. Romero opens a metal headgate off the Pecos, where a *presa*, or dam, diverts water, and a stream flows slowly downhill into the acequia *madre*—the mother ditch. On a large ditch, with 80 or 90 members, water might take six to eight hours to reach the last user if the soil is unusually dry. Many a mayordomo has received a panicked late-night call inquiring, "Where's my water? It's my time to water."

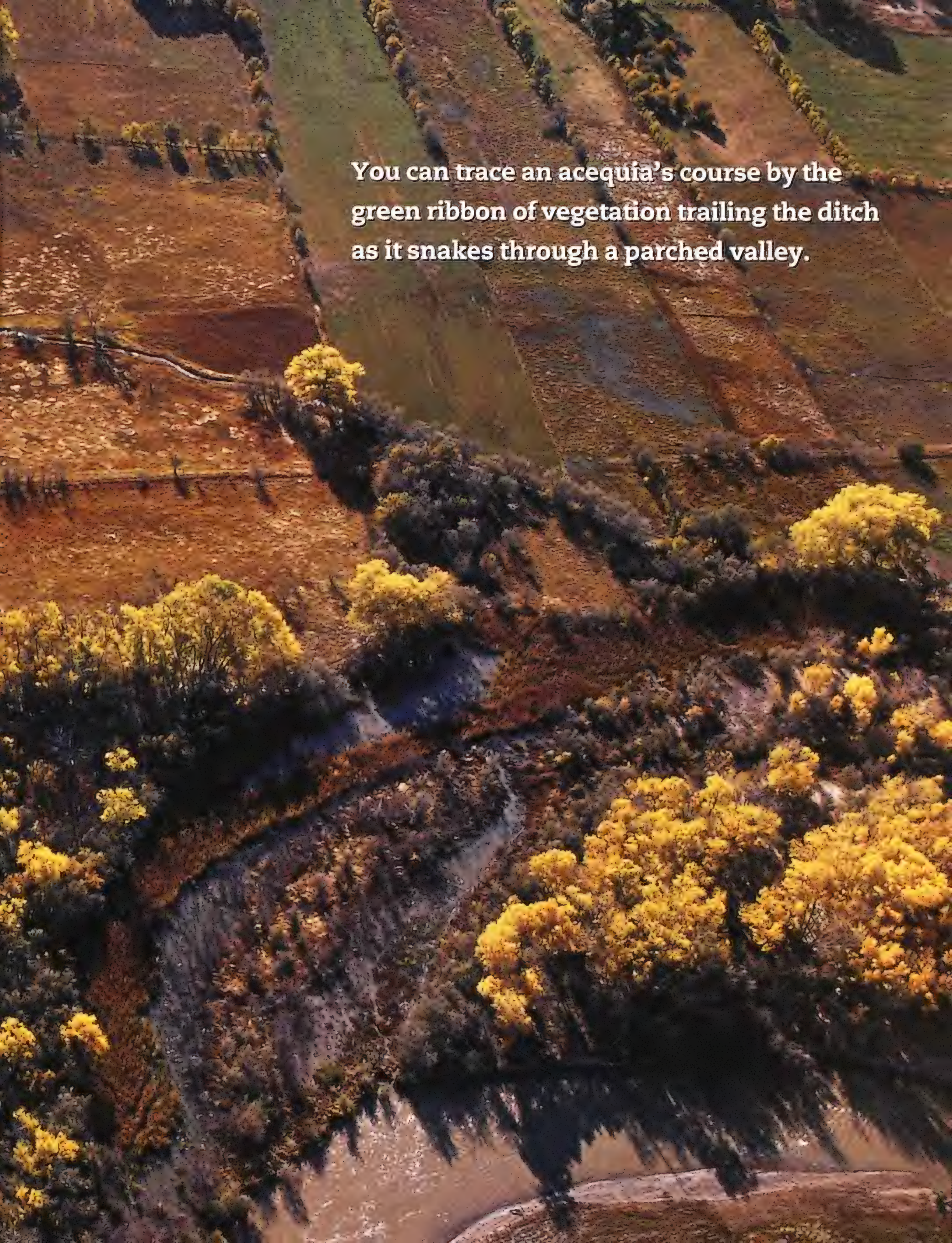
Each acequia member, or *parciante*, is allowed to take a share of water, or *derecho*, corresponding to the amount of land he or she holds. Every ditch is different, but a half-derecho parciante might be entitled to irrigate for two hours on Tuesdays and Fridays, while a full-derecho parciante could use four hours on Wednesdays and Saturdays. "This is not a precise gallons-per-minute deal," one mayordomo explained.

When the rivers are full, so are the acequias, and the mayordomo's job largely involves clearing limbs and trash from headgates every few days and listening to stoop-shouldered women talk about their apple crops. For this, the acequia's three-person commission pays a mayordomo as little as nothing, on a smaller ditch, or up to about $400 a month, on a larger one.

Activists and farmers have joined forces, filing lawsuits to preserve threatened ditches.

But when water is scarce, as is often the case in a region that averages just over a foot of precipitation annually, parciantes must conserve and share, and the mayordomo must enforce their ancient honor system, making sure those at the top of the ditch leave enough water for those at the bottom. That's when the mayordomo must plead and cajole, and sometimes threaten parciantes with fines, or worse. It's not so common these days, but some vintage ditch bosses used to pack a pistol when setting off on their ditch walks. Now diplomacy will usually suffice. "You have to be a mediator, a counselor and a confidant," Romero tells me. "You must always treat everyone equally, but every mayordomo learns quickly who he can completely trust and who must be watched to see that they don't open their gate at two in the morning."

Fortunately for mayordomos, it is very difficult to hide a soggy field of alfalfa if everyone else's crops are toasting. Neighbors learn to be nosy on an acequia. But Romero manages a relatively small ditch and says he rarely has problems—at least not with humans. "Beavers and gophers are what cause real havoc," he says. "The beavers work at night and can cut



You can trace an acequia's course by the green ribbon of vegetation trailing the ditch as it snakes through a parched valley.

down a three-foot-wide cottonwood. They're awesome. They'll dam the ditch so that the water goes over the sides. Then you have to rebuild it. Gophers just bore holes right through the sides."

There's no telling what Juan de Oñate thought of gophers, but in 1598 the Spanish governor led a party of colonizers from central Mexico to the frontiers of New Spain along the upper Rio Grande above today's Santa Fe. In their diaries they marveled at how the small Indian villages they encountered, which they called pueblos, or towns, already had fairly advanced irrigation systems, reminiscent of the Arab-engineered systems the Spaniards had known in Iberia. ("Acequia" comes from the Arabic *as-saqiyah*, for canal.) Two years later, near what is now the town of Española, Oñate used some 1,500 Indian laborers to build the first permanent acequia. According to University of New Mexico professor José Rivera, acequias were usually the first things built in any new Spanish settlement, even before churches.

These little ditches are an anachronism in the age of multibillion-dollar irrigation projects that can be seen from outer space, yet in New Mexico the humble rivulets have inspired festivals, poetry and the 1988 Robert Redford movie *The Milagro Beanfield War*, based on a John Nichols novel. Acequias stir bitter legal battles, unite and divide communities, carry sacred water to Indian pueblos and create new rural economies and sustain ancient ones, while their protectors resist the thirsty suburban sprawl that threatens to suck the ditches dry.

Few New Mexico villages are more attuned to these issues than tiny Dixon, home to seven acequias, about 40 miles north of Santa Fe. As in Taos and Santa Fe, the real estate bonanza here has sent land prices soaring—the cost of an irrigated acre in the Dixon Valley has risen sharply to $40,000 or more—and has persuaded many old-line Hispanic families to sell.

From his backyard filled with 25 varieties of heirloom-apple trees, mayordomo and journalist Estevan Arellano, 55, told me his father had sold a four-acre tract just next door for $8,000 in 1964. "They're now asking $350,000 for it," he muses, having grown inured to the shock.

Those who do remain on their land find themselves joined in preserving the acequias by newcomers like Marie Coburn, a red-haired cabaret singer from Oakland—think Bette Midler in overalls—who came to town 14 years ago and remodeled a territorial-style house with three acres on an acequia. Eventually she started growing zinnias, globe amaranth, yarrow and cockscomb to supply dried flowers for her wildly distinctive wreaths and carnival-style masks, creations that became a big hit at the Santa Fe farmers' market.

Quietly, Coburn and others became part of a promising trend in northern New Mexico—small farmers and boutique gardeners putting land back into production and actually making a living. In doing so, they help keep the acequia alive by irrigating—a matter of no small consequence, since, according to New Mexico law, landowners who fail to irrigate for five consecutive years can lose their water rights. (If the law were ever enforced, say several state water experts, perhaps as many as half of northern New Mexico's landowners would lose their water—though not without sparking a small revolution.)

By the late '90s, Coburn's status as a hardworking small farmer with no influential enemies qualified her to be nominated for the post of mayordoma of her Dixon ditch, the 98-member Acequia del Llano. "I was qualified," Coburn says with a laugh, "because I said I would do it."

One of her Hispanic parciantes confided to me that he thought a strong female like Coburn was actually better for the ditch because stubborn macho males would be less inclined to physically intimidate a woman. As for Coburn, "I never intimidate," she says with a chuckle. "I would rather use peer pressure."

One thunderous summer afternoon I joined Coburn as she walked along the Rio Embudo to clean out the headgate of her acequia. "This—eeeeeeyuck!—is the hard part," she grunt-

Marie Coburn's acequia-irrigated fields supply her thriving dried-flower business.

ed as she leaned into the rushing Embudo to wrestle out a six-foot cottonwood limb. Her scuffed hiking boots and khaki work pants were thoroughly soaked. Beads of sweat flew off her freckled nose. During one memorable storm, she recalled, she had left her home six times to clean out the headgate so the ditch would flow freely. "Sure, I wanted to stay in and stay warm," she said, "but it's those times that you are forced to go out in the rain in the middle of the night that you have time to think and see the acequias in ways that most people never do."

In one bleak drought in 1996 she had to limit her parciantes to 30 minutes of water a week, trusting everyone to cooperate for the common good. They did, and that simple act of community sacrifice was repeated throughout all of northern New Mexico that summer. "It was inspirational to me," says Coburn, "that people could actually share such a valuable resource. It gave me hope."

For the farmer who limps along on marginal land that's been in the family for generations, the acequia makes possible a life that otherwise could not be afforded. The ditches allow thousands of families to grow enough alfalfa, oats and corn to feed cows, pigs and chickens. "If we have meat, we can survive up here on very little," one Hispanic farmer in his 50s told me. "We built our homes. Our kids are grown. The cars are paid for. But if we didn't have the ditch, food would cost too much, and we'd all have to find jobs at Wal-Mart."

It is an article of faith for those families: water is inseparable from the land. The ditch is very nearly a member of the family, a living connection to ancestors and an independent rural way of life that slips farther away with each new generation.

The acequias are under serious pressure, much of it coming from water brokers and from developers, who quietly come to town and seek out families willing to sell their land or their water rights. The incentives are compelling, since in some desirable villages north of Santa Fe, rights to an acre-foot of water—325,851 gallons, the amount needed to cover one acre with one foot of water—are going for a one-time fee of $30,000 to $40,000, while below Albuquerque the same amount might cost only $4,000.

Although the transfer of water rights can be maddeningly complex, the basics of such transactions are simple. Let's say an acequia farmer in Dixon irrigates one acre of land. The state has determined that in this section of the Rio Grande basin a single irrigated acre is entitled to two acre-feet of water annually. (A family of four in Albuquerque uses about 200,000 gallons of water in a year, while nearby, golf courses often use a million gallons in a single summer day.) The Dixon farmer, whose ditch eventually feeds into the Rio Grande, can then sell the right to this water to a buyer on the same river drainage system.

The practice of trading in water as a commodity, observes one activist, is "like selling sunshine."

Some water brokers advertise their services. Others are more discreet, scouring newspapers for obituaries and notices of bankruptcies and divorces. "They find out who's financially vulnerable," says Paula García, director of the nonprofit New Mexico Acequia Association. "It's not hard to find who wants to sell."

It is, after all, the American way: willing seller meets eager buyer. But as more farms and ranches give way to day spas and rust-colored adobe mansions—New Mexico lost 3 percent of its farmers from 1992 to 1997—the Hispanic rural culture that has nurtured the acequias for 400 years begins inexorably to unravel.

Mayordomo Estevan Arellano checks the acequia that will water his orchard.

Not everyone, though, sheds a tear. "The acequia system is doomed," says water broker Bill Turner, who oversees the Albuquerque-based company Westwater Resources. He is also a member of Republican New Mexico Governor Gary Johnson's task force on water. "Within 50 years, the acequias will largely be all gone. But change is good. Communities live and die. That's the way of the world." A former Peace Corps worker in Cyprus, Turner has studied water systems all over the world and refuses to romanticize the acequia culture. "Most of these villages are a welfare or subsistence economy," he says. "Many young people are not content with their lives. I don't want to see them imprisoned in their communities."

Not surprisingly, Paula García views Turner as a "spokesman for the dark side." She and other acequia loyalists see his unwavering allegiance to the market economy as shortsighted and destructive. And these are always volatile issues, influenced as they are by Hispanic resentment of Anglo encroachment. The Anglo proportion of New Mexico's population grew about 8 percent from 1990 to 2000.

In some Hispanic communities, the stigma attached to "selling out" is so pervasive that older residents will speak with brokers like Turner only in secret. "I've got about a dozen people who have contacted me in the last month," says Turner, "but I can't tell you a thing about them, not even the county they're from. It's too sensitive. One older man told me that if his wife knew he was talking to me she would divorce him."

As for García, she knows firsthand what it's like to grow up on a poor New Mexico ranch where survival depends upon water, and the pressure to sell out hangs in the air like the smell of damp hay. A graduate student at the University of New Mexico, García grew up on family land in Mora County, northeast of Santa Fe, where more than 85 percent of the county's 5,200 residents are Hispanic and nearly 40 percent of its children live in poverty. "Every so often," she says, "people drive by and ask my grandfather if our land is for sale. I've never actually been there when that has happened, but if I ever am, they will regret having crossed my path."

Making what they hope will not be a last stand, some farmers and activists believe acequia culture can be saved with legislation requiring a majority vote of parciantes before any water rights can be sold, and by nurturing farmers' markets and the burgeoning organic produce industry.

Yet as long as so many of us see water as a mere commodity and not as a social resource to be shared, acequia loyalists have good reason to fear for their culture. "When I tell older people in these communities that you can actually buy and sell water rights, they can't believe it," says García. "They say, 'You can do that?' It's antithetical to everything they are about. They say it's like selling sunshine."

Bruce Selcraig, a writer based in Austin, Texas, can be reached at selcraig@swbell.net. Photographer Glenn Oakley works out of his studio in Boise, Idaho.

Majestic humpback whales share coastal waters with 10,000 year-old icebergs.

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BUY WAR BONDS

Any Bonds Today?

WHEN UNCLE SAM PASSED THE HAT IN WORLD WAR II, AMERICANS CAME UP WITH $185 BILLION TO BUY U.S. BONDS

TAKE A 700-POUND PIG, PAINT ITS TOENAILS bright red and dangle silver bangles from its ears. Put that porker up for auction and what would it fetch? How about $19 million? By some reports that's what "King Neptune," the war bonds hog, made between 1942 and 1946, after the animal was auctioned off again and again as part of what has been called the biggest selling campaign in history. (Once the pig was purchased, patriotic duty required the owner to donate him to the next sale.)

When the "tall man with the high hat" came knocking, as Irving Berlin called Uncle Sam in his 1942 song "Any Bonds Today?" 8 out of every 13 Americans scraped together a total of $185.7 billion to invest in victory.

Today, the government has introduced a new bond—the Patriot—to support the war against terrorism. Though it's just a redesign of the popular Series EE savings bond, it symbolizes the same can-do spirit that helped pay for World War II.

As described in *Pledging Allegiance: American Identity and the Bond Drive of World War II* by Lawrence R. Samuel (Smithsonian Press, 1997), that spirit translated into a bond bandwagon that knew

N. C. Wyeth's stern-faced Uncle Sam (opposite) exhorted Americans to invest their nickels, dimes and dollars in the fight against fascism. Between 1941 and 1946, 85 million did just that.

NORTHWESTERN UNIVERSITY LIBRARY'S GOVERNMENT PUBLICATIONS & MAP DEPARTMENT, SMITHSONIAN AMERICAN ART MUSEUM, GIFT OF BARRY AND MELISSA VILKIN, P. 64 COLLECTION OF ALAN G. WASSERMAN

"Virtually the only profession that had some doubts," writes Samuel, "was the clergy."

SOLJER!!- YO'LL WANT YO' OWN DAISY MAE AN' YO' OWN LI'L CABIN WHEN IT'S ALL OVAH!!- MAKE SURE O' TH' FEW-CHER!!- BUY A G.I. WAR BOND EV'RY MONTH FO' $7.50!!- IT'S WORTH $10.00 IN TEN Y'ARS!!!
al Capp
BUY BONDS the G.I. way!

A 1942 government study found that realism made for a more effective war poster than humor. Fortunately, that didn't stop Al Capp from enlisting Daisy Mae in the cause. Norman Rockwell's "Four Freedoms" theme was rejected at first, but the posters became classics.

no bounds. Movie stars such as James Cagney, Lucille Ball and Bing Crosby turned up at rallies to extoll the virtues of investing in the bonds. Many will recall the untimely death of comedienne Carole Lombard—Clark Gable's wife—in a plane crash. Only the day before she had raised $2.5 million at an Indianapolis bond rally. But not just celebrities were involved: bartenders, milkmen, even ice men, sold Series E bonds, in denominations from $25 to $1,000. Held to ten-year maturity, they earned 2.9 percent. (Armed Forces personnel could buy a $10 denomination.) "Virtually the only profession that had some doubts [about selling bonds]," writes Samuel, "was the clergy."

The poster proved to be the Treasury Department's most important promotional tool. Plastered on buses and trolleys, and in libraries, schools and factories, posters drove the message home with pithy slogans and poignant appeals. So popular were Norman Rockwell's "Four Freedoms" posters that Treasury mounted a traveling exhibition of the original art, at which bonds were sold.

Army illustrator Sgt. Ardis Hughes, now 90 and still painting at his winter home in St. Augustine, Florida, remembers being detailed to Treasury to create bond posters. "If they'd used me as a soldier," he says with a chuckle, "they would have lost the war." In one of the dozens of posters and billboards he did between 1942 and 1946, a weary soldier carries rough-hewn pickets on his shoulder. Hughes' slogan: "War bonds are cheaper than wooden crosses."

"I did another, of a mother and a father embracing. Behind them a star hung on the wall; in their hands was a telegram. I remember showing it to a general and he said to me, 'That's a lot of power in a little paint.'" That powerful paint sold a lot of war bonds. —*Beth Py-Lieberman*

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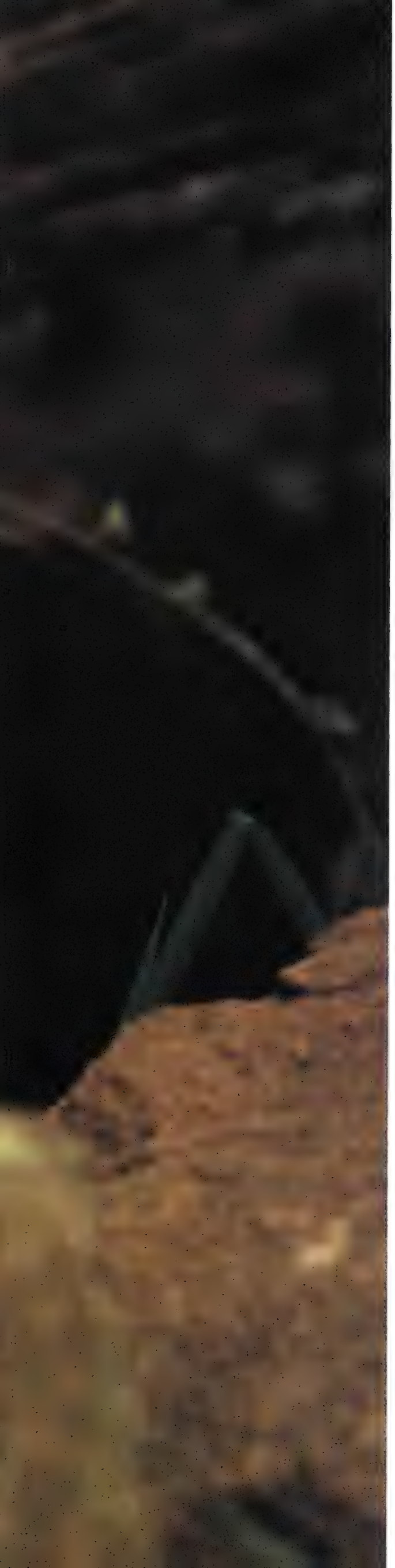

GIVE THE DEVIL HIS DUE

BLAME BUGS BUNNY AND A NASTY YAWN FOR THE TASMANIAN DEVIL'S BAD RAP

BY DEREK GRZELEWSKI

"MURDEROUS AND MALEVOLENT," READS THE PROmotional material for a wildlife video, "with gore-encrusted faces, these slashed and disfigured undertakers terrorize Tasmania." Encyclopedias sketch a portrait of a vicious-looking beast, a cross between a bear cub and pit bull terrier, wielding an impressive array of teeth. Even Tasmanian devil expert Eric Guiler writes that the animal is "ugly, unfriendly and smells objectionably strong." Only their total lack of economic value, he believes, protects them from extinction. How did an animal the size of a spaniel earn such

PHOTOGRAPHS BY ARNO GASTEIGER

The shy and timid Tasmanian devil gained its reputation for fierceness in part from its ferocious-looking yawn when cornered or frightened.

Menna Jones often finds devils, like this 18-month-old, to be placid after capture. Powerful teeth tear into prey as well as crush bone.

ghoulish epithets? This is the question I am trying to answer as I drive my rented camper one midnight at a crawl, looking for the devil himself along a narrow gravel road winding through Cradle Mountain National Park in central Tasmania.

In daylight, the trunks of eucalyptus trees turn a lovely pistachio color and stand straight and naked like matchsticks in the midst of the park's hills. By night, however, the landscape becomes unmistakably marsupial. Red and yellow eyes reflect the beam of my window-mounted spotlight before vanishing in an instant. Thump! thump! thump! Kangaroos and wallabies recede into the night, while an occasional wombat, a kind of a ground koala, surprised by my headlights, breaks into a trot. Among Tasmania's mostly nocturnal fauna, only the curious or careless are easy to see. They often end up flattened on the road. Since the alleged extinction of the thylacine, known as the Tasmanian tiger or wolf, farm pickup trucks and tourist campers vie with devils for the title of the island's most effective predator.

"Look for roadkills and you may find devils," said a zoologist in Tasmania's capital of Hobart. "For them, the highways are like free take-out diners." I had read that some 150,000 devils haunt the Tasmanian countryside. But while I have driven many painfully slow miles through the back roads of Tasmania—an island southeast of Australia that is a little larger than West Virginia—and have seen enough roadkills to last a lifetime, not a devil have I seen.

The Tasmanian devil would likely have been left to its own devices were it not for Warner Brothers' cartoonists. During a brainstorming session in 1954, director Robert McKimson and writer Sid Marcus bemoaned the need for a new adversary for their star Bugs Bunny. Animators, they complained, had turned practically every animal into a cartoon character. About the only thing left, they joked, was a Tasmanian devil. In that moment, a star was born. Soon thereafter came the memorable scene in *Devil May Hare*, when a stampede of panic-stricken animals rolls past Bugs Bunny's rabbit hole. "Eeeh, what's up?" Bugs asks as the terrified menagerie scrambles by him. "The Tasmanian Devil is on the loose!" a turtle stutters out in fear. "Run! Run! Run for your lives!" Blissfully ignorant, Bugs consults an encyclopedia, then reads aloud a list of what the devil eats: "Tigers, lions, elephants, buffaloes, donkeys, giraffes, octopuses, rhinoceroses, mooses, ducks . . . " he intones. "Rabbits," growls another voice. Bugs turns to find Taz in his rabbit hole.

After three nights of futile searching, a glimmer of hope: on a guesthouse bulletin board I come across a plea for volunteers to help in a study of Tasmanian devils in Freycinet National Park. "Good physical fitness required," this note reads, as well as an ability to function in all weather conditions. It is signed Dr. M. Jones, Australian National University. I pack the camper and set out for Freycinet, a peninsula of pink granite mountains forested with eucalyptus, midway along Tasmania's east coast.

M, for Menna, Jones turns out to be a jovial woman who spends nine months of the year in the field studying Dasyurids (from Greek for shaggy tails), a family of carnivorous marsupials that includes devils. Like them, she's on the run most of her waking hours, though unlike the objects of her curiosity, she often forgets to eat. My three unproductive nights are nothing, she informs me with a wave of her hand. In her 12 years of studies, she has seen only half a dozen devils in the wild. Fortunately, they are easy to trap. In a 77-square-mile study area, Jones has cap-

P. 69 WARNER BROTHERS

Injuries from duels can be ghastly, often leaving faces terribly disfigured.

tured 310 animals and fitted 44 of them with radio collars impregnated with cayenne pepper. The condiment protects the radio's electronic circuitry from destruction by devil teeth. (In devil droppings, Jones and other researchers have found aluminum foil and steel pot scrapers, a wallaby foot complete with a snare, a tea towel, the head of a tiger snake and numerous porcupine-like quills of an echidna.)

The bite of a devil can pack the power of an animal four times its size, which makes a 25-pound male bite like a 100-pound hound. But devils are more bluff than bite. They establish dominance with nips. A new arrival at a roadside feast will often back into the carcass so that the nips of its angered, fellow carnivores will fall on its thick-skinned rump. But some of the most ghastly injuries occur after mating, when females violently lock those hydraulic-press jaws on the cheeks or necks of their mates to drive them away. Injuries from such duels, although mitigated by the devils' high pain threshold and phenomenal healing abilities, can leave their faces terribly disfigured and gruesome looking.

The picture Jones paints of the devils is decidedly at odds with their popular image. Despite their often pungent scent, which they use to communicate with each other, they are meticulously clean, grooming themselves like cats. Most surprising of all, in the right situations, they can be as docile as beloved pets. Her devils, Jones tells me, quickly grow accustomed to repeated trappings. She can even whisper them into sitting quietly on her lap while she performs routine measurements. On the whole, they are rather timid animals, which is the real reason even Tasmanians rarely get a chance to see them. Still, they have one trait that has been their undoing. When frightened, confronted or otherwise made to feel uncertain, devils blush: the blood pumped to their heads turns their furless ears hellishly red. And then they yawn. Biologists call this yawning "displacement behavior," akin to some people suddenly taking a profound interest in their fingernails when pulled over by a traffic cop. It is the devils' yawn that gives them their rabid pit-bull look. Which is ironic, Jones says, because in reality, a devil that has shown its fangs in a yawn rarely attacks. It'd much prefer to back out, creeping away as if in slow motion, freezing at an assailant's slightest movement. (The strategy has proved woefully ineffective against dogs, many of them smaller and weaker than themselves, to whom devils often fall victim. In fact, zoologists believe that dingoes exterminated the devil in Australia not long after Aborigines introduced wild dogs there.)

After dusk I accompany Jones on her nightly patrol. Along rough tracks cut through the thin eucalyptus woodlands, she drives the Devil Bus, a four-wheel drive pickup fitted with a long antenna and a gunman's chair. The entire contraption is in effect a mobile radio periscope that, when cross-referenced with four mountaintop sentries staffed by American and Australian volunteers, shows the location of each devil and its movements through the night.

Beep! beep! beep! The receiver picks up compass coordinates of devils, now at the height of their activities. The

A devil makes short work of an illegal trap (above left), most likely set by a farmer. Nick Mooney nurses a devil orphaned by a car.

radio crackles with the voices of the volunteers, college biology majors with a hunger for field experience. They camp near the towers for six days at a stretch, plotting devilish movements. The data they feed into a computer show the animals' home ranges and nightly movements, which so far have been mainly speculative.

"Devil Bus to all towers!" Jones radios out. "Anyone have a bearing on Devil 18?" Back come several replies that pinpoint a devil swimming half a mile offshore. Jones rolls her eyes. "Devils love water, but not this much," she says. "The signal must be reflecting off the mountain."

We work through the night, changing locations, monitoring the radio, rigging and de-rigging the periscope. It would be a thoroughly pleasant outing were it not for the nagging thought that, despite three weeks in the field, not one of the volunteers has actually seen a devil. As for me, the closest I will come to seeing one in the wild takes place the next night, when, parked in an off-road forest clearing, I am awakened by a crunching noise under the camper. I jump out with a flashlight to find my leather hiking boots re-

Entrepreneur Geoff King has created a unique restaurant on the edge of Tasmania where visitors pay to watch wild devils tear into a meal.

duced virtually to laces. A branch of a nearby bush still vibrates where the devil has bolted for cover.

Commonly considered the hyenas of Tasmania—vermin in their own homeland—devils are blamed for raiding poultry yards, hunting sheep and decimating countless numbers of lambs. Their scientific name may be *Sarcophilus laniarius* (flesh-loving), but rural Tasmanians more often refer to them as bastards, exorcising them from their fields and pastures with poisoned baits and bullets.

The common misperception of devils is what led Androo Kelly to place a bus-size statue of a benign-looking devil at the entrance to the Trowunna ("Tasmania" in a local Aboriginal dialect) Wildlife Park, which he purchased in 1993. Since then, Kelly has become the animal's most ardent advocate, developing Trowunna into both a refuge for injured and orphaned marsupials as well as a center for devil de-demonizing.

"Tasmania was once the most feared penal colony of the British Empire," Kelly tells me when I inquire how his favorite animal got such a bad name. "It was an antipodean gulag, a kind of a down under Alcatraz." Then known as Van Diemen's Land, it became a dreaded destination for tens of thousands of convicts sent here to work in inhuman conditions. The convicts built and ran Australia's first railway near Port Arthur. (Literally ran: four men at a trot pushed the carriage along a 3.5-mile-long wooden track.) They worked quarries and logged forests of prized Huon pine, carrying out the timber in a formation resembling a centipede: dozens of men chained on both sides of the log carried it on their shoulders over rough terrain and across cold mountain rivers.

A century before Solzhenitsyn, Van Diemen's Land was an archipelago of gulags, ringing with the sounds of shackles and chains. But at night came another sound, a high-pitched scream from the bush outside the prison compounds. To many convicts, it brought to mind the cries of tortured souls, perhaps those of the Aborigines wiped out ruthlessly by the early settlers. This was the wail of the devils settling their disputes, but it sounded more like Satan's macabre laughter. And thus, Kelly says, the image of a hellhound was born, a cursed spirit of a cursed land.

The devils, Kelly tells me, live such a furiously hyperactive life, running some ten miles every night in pursuit of food or mates, that, in time, they simply burn themselves out. Few wild devils live longer than five years, and many suffer from bad backs, slipped disks and arthritis, their once-impressive teeth chipped and broken.

Even mating is a form of I'll-drag-her-into-my-burrow combat. The female gives birth to 20 babies, each about half an inch long, and they immediately set off on a long crawl to the mother's marsupial pouch. "It is an all-important race," Kelly says, "because, in the pouch, there are only four nipples." The also-rans get no second chances. This running start sets the frenetic pace that characterizes the rest of their lives.

My search to see devils in the wild finally takes me to

To see a devil eat is to marvel that something so small can consume so much so quickly.

the rugged western coast of the island. Marrawah, a tiny settlement of a few dozens hardy souls, has an end of the world feeling, perched as it is on the edge of an ocean that stretches unimpeded all the way to South America. Frothing breakers roll in under leaden skies, exploding against the rocky shoreline. The vegetation is whipped into stiff sculptures by the relentless, salt-blasting wind. Geoff King, a farmer turned restaurateur, welcomes me with a bone-crunching slap to my shoulder.

Not a graceful sight: a devil's rollicking, comical lope or canter is the result of its long front legs and short back legs, a configuration similar to that of a hyena.

This land, King tells me, has always been too marginal for farming, but it's excellent for wildlife, so he turned it into a habitat reserve and started a restaurant—for devils. Tourists pay some $20 to watch the creatures eat. (Seats are limited because King will serve only five times a fortnight; to do more would habituate the animals to hand-outs.) The "restaurant" is an old fisherman's cottage, painted white and cluttered with wicker abalone pots. Outside its panoramic window, King fastens a road-killed wallaby to a stake and trains a small light on it. The winter night descends quickly, and King lights a candle. The devils, he says, shouldn't be far away.

While we wait, King tells me that the devils' status as vermin is absolute folly. They will, of course, try to hunt farm animals, and newborn lambs in particular. But because they can't climb fences as adults, in reality the devils kill only sick or malnourished animals. And because of their witches' brew of digestive enzymes, the devils are the best sanitary crew a farmer could have.

Suddenly a mantelpiece speaker blasts into life, announcing that tonight's guests have arrived. I take a cautious peek through the window. One devil is crouched behind the bait, tugging at it and squinting into the light, while another, more wary, skulks in half-shadow. The animals appear tense, ready to flee at the slightest disturbance, but slowly the pull of the carcass lessens their fear, and they begin to feed in earnest.

To see a devil eat is to marvel that something so small can consume so much so quickly—up to 40 percent of its body weight in half an hour, or the equivalent of a person knocking back a 50-pound side of beef at a single sitting. Soon one animal is so full it waddles off, bloated as a basketball, but another arrives, then another, to begin their feasting. In the end, all that remains is chewed-up fur and the ten-inch spike used to tether the carcass.

Indeed, the devils eat as if there was no tomorrow, which for a long time was nearly the case. They've had to endure a lengthy witch-hunt and a merciless bounty scheme that saw the end of their thylacine cousins. The devils themselves were once so rare that they were thought to be extinct, but these resilient creatures beat the odds and have become far more numerous than before.

I can see that King is proud of the devils, and proud, too, that every person who passes through his restaurant helps dispel the myth of an evil beast, freeing these timid animals from their undeserved stigma. Just before midnight, as our candle is about to burn out, he gives me a look that asks if I have seen enough.

I nod, and he flicks off the floodlight. The darkness returns, and we let the devils be.

Frequent contributor and New Zealander Derek Grzelewski last wrote about Australian crocodiles. Arno Gasteiger's most recent book of photographs is entitled New Zealanders.

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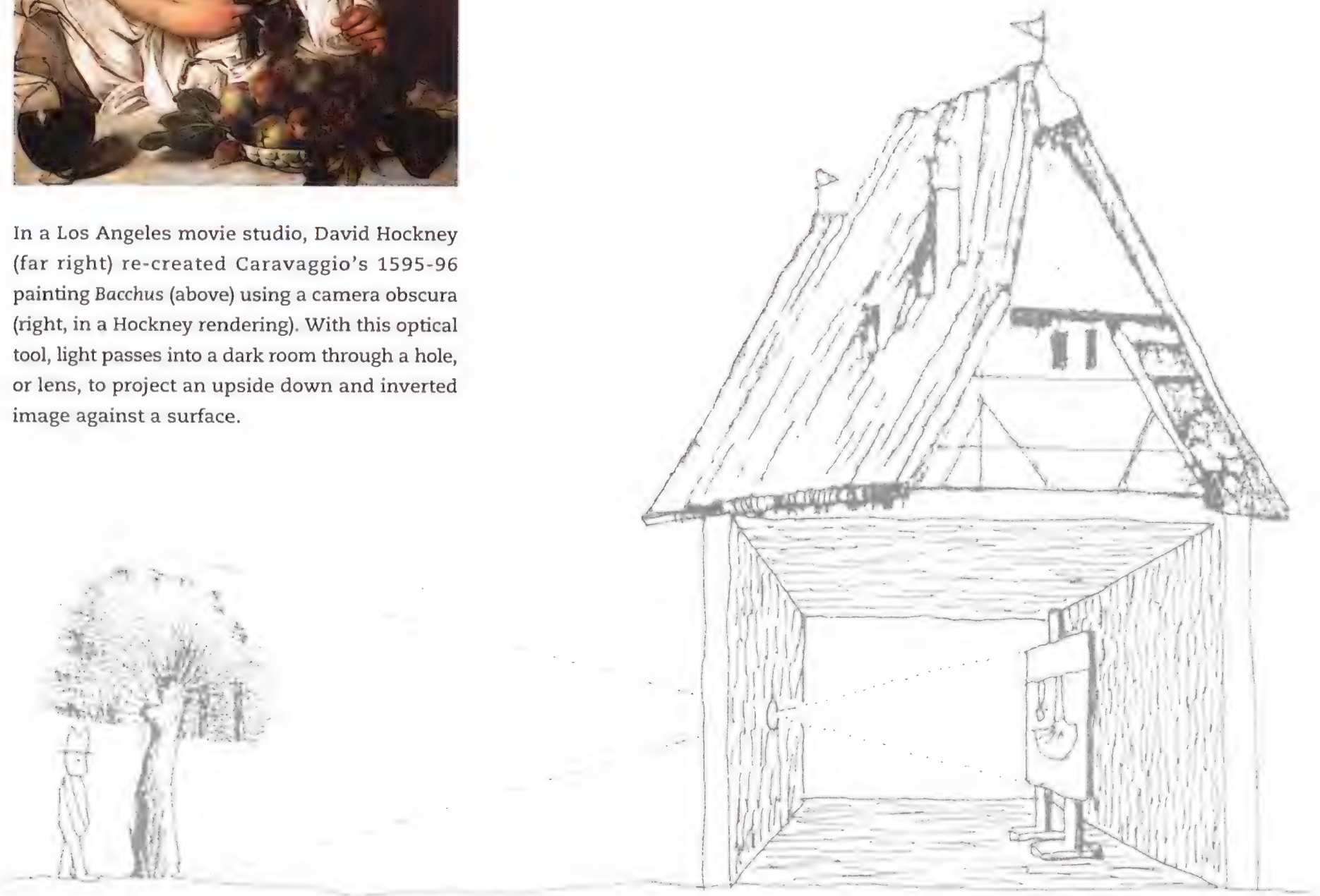
Mirror Images

DAVID HOCKNEY'S BOLD THEORY THAT CARAVAGGIO, LEONARDO AND OTHERS USED LENSES TO CREATE THEIR MASTERPIECES HAS TURNED THE ART WORLD UPSIDE DOWN

BY JENNIFER LEE CARRELL

In a Los Angeles movie studio, David Hockney (far right) re-created Caravaggio's 1595-96 painting *Bacchus* (above) using a camera obscura (right, in a Hockney rendering). With this optical tool, light passes into a dark room through a hole, or lens, to project an upside down and inverted image against a surface.



I AM STANDING IN A SMALL, DARK ROOM with artist David Hockney. On a canvas in front of us floats the image of a toga-clad youth, his dark curls twined with fruit, his cherubic lips pursed in a sly smile, and his body soft with a grace that will edge toward flaccid with age. For now, though, the boy's luminous beauty is as ageless as it is startling.

True, he is upside down, reclining at a table apparently suspended from the ceiling. Even so, what captivates the eye are the dramatic, high-contrast lighting, the deep, opulent colors, and the sheen that skates off smooth surfaces. I've seen an image like this in only one other place: Caravaggio's famous carousing *Bacchus* that hangs in the Uffizi Gallery, in Florence.

But this is not a painting, or even a reproduction. It's a live projection made with nothing more than a glass lens, a closed-curtained room and bright light—exactly the way Caravaggio may have created his own Bacchus, four centuries ago—at least, according to a bold theory advanced by the acclaimed British artist David Hockney.

Hockney claims that he has rediscovered a lost trade secret of Western art's grand masters—not just Caravaggio, but also van Eyck, Holbein, Leonardo da Vinci, Van Dyck, Velázquez, and perhaps even Rembrandt. For centuries, their luxuriant, nearly photographic realism has been celebrated as the inexplicable product of artistic genius tinged with a dash of magic.

Hockney has caused jaws to drop with the provocative idea that these masters had a little help, working their magic not with smoke and mirrors but rather with mirrors and the strong, hot light of the noonday sun. From the early days of the Renaissance to the dawn of modern photography, Hockney believes, painters secretly used lenses—both concave mirrors and the more common transparent glass sort—to enhance the realistic details of their pictures. If Hockney is correct, for

Hockney believes that the *The Ambassadors*, painted in 1533 by Hans Holbein, makes the case for the use of lenses. The German painter most likely created the distorted skull in the foreground by projecting the image of a skull with a lens and then tilting the canvas. Hockney restored the skull (top right) by reversing the process with a computer. Other clues include a perfectly rendered globe (middle) and a foreshortened lute (bottom), both shapes that are very hard to render accurately without the use of tools.

more than 400 years such redoubtable artists as Jan van Eyck and Robert Campin in the 1430s to Jean-Auguste-Dominique Ingres, who died in 1867, used optics to reflect the images of models and objects directly onto their panels and canvases. These projections compress a scene's complex, three-dimensional masses, gradually shifting light and color into clear, two-dimensional shapes whose outlines can be quickly and confidently traced.

"You mean they were cheating!" exclaims almost everyone I tell about Hockney's theory. That's one illusion Hockney is eager to dispel. "Optics don't make marks," he insists. "Only artists do that. If you think you can look at a projection, pull out a paintbrush and produce a van Eyck or a Caravaggio, think *again*," he says sternly. "You *can't*."

The room in which we speak is cut off from the rest of a filmset on the Panavision lot in Los Angeles by plush burgundy draperies. The British Broadcasting Corporation is here making a documentary about Hockney's theory.

"We're standing inside a camera, essentially," he is saying. Nowadays, that word makes people think of a small black box filled with mysterious machinery, but the word "camera" comes from "camera obscura"—a phrase that Hockney points out means "dark room" in Latin. "The operative part is nothing more than a curved bit of glass," he says.

A peek through the curtains reveals a startlingly garish scene. Just outside sits the "real" Bacchus—a doe-eyed actor who arrived on the set sporting a nipple ring and purple nail polish, his eyes puffy from some likely carousing of his own. Now he's draped in a sheet, wilting under the hottest, brightest lights Hollywood can muster. (In Caravaggio's day, the only light strong enough for the job would have been direct sunlight.) His skin is a blinding, washed-out white; his blue-black wig, jeweled grapes, and the Knudsen's Razzleberry juice that passes for wine glitter like cheap trumpery.

As the curtains fall closed, though, we see an altogether different version of that scene inside the camera obscura. A bright beam of light streams through a transparent glass lens that is fitted into a small opening in the curtains. That lens gathers light rays from the scene outside and bends them as they pass through the glass, on their way to striking the white canvas propped near the opposite end of the darkened room. This phenom-

NATIONAL GALLERY, LONDON (4)

enon, called focusing, reverses images left to right, and top to bottom, which is why the Bacchus on the panel appears upside down.

The process also loses a great deal of light, dimming the scene considerably, jacking up the contrast and compressing the color palette to deep, rich tones. It creates, in other words, the characteristic look of a Caravaggio painting, termed "chiaroscuro," or "bright darkness."

"Bacchus, god of Razzleberry, have a drink," commands Hockney with impish glee to the model. The film crew gasps collectively as the Bacchus on canvas yawns and picks up a goblet whose cherry-red contents have deepened into burgundy. Even to people who spend their lives making films and videos, this looks like magic: with no more techno-wizardry than a small, curved piece of glass, Hockney has brought to life a scene worthy of a master.

"We're not only talking about artists having seen and used photographic images," he says. "Some people were watching color movies 600 years ago."

Hockney's discovery began nearly three years ago, when an exhibition of Ingres' portrait drawings in the National Gallery in London sparked his professional curiosity. Nineteenth-century French painter Jean-Auguste-Dominique Ingres is renowned for his exquisitely detailed portraiture. How, Hockney wondered, had he achieved such accuracy at so small a scale?

"Everything seemed right," says Hockney. "Even the mouths. If you're an artist, you know how difficult that is." Hockney certainly does. In addition to his work with photocollage and stage design, Hockney is an accomplished draftsman. He quotes John Singer Sargent: "A portrait is a painting with something wrong with the mouth."

In his studio, Hockney enlarged reproductions from the catalog to study the drawings more closely. Ingres' lines showed none of the tentative groping that is characteristic of an artist drawing from life. They reminded him of the works of pop artist Andy Warhol.

It was an unlikely but key connection: Warhol's boldness stemmed, essentially, from tracing; Warhol cast slide projections onto his canvases and then reduced complex figures to a few suggestive lines. Perhaps, Hockney surmised, Ingres' similarly bold lines also stemmed from using some kind of optical tool.

Had Jan van Eyck turned over the convex mirror hanging on the wall in his *Arnolfini Wedding*, he would have held an optical tool suitable for creating the meticulous detail found here. Note the chandelier, a study in complicated foreshortening. Unlike any other object in the painting, the chandelier, says Hockney, "was done without any detailed underdrawings or corrections."

NATIONAL GALLERY, LONDON (C), P. 76 SCALA ART RESOURCE, NY UFFIZI GALLERY, FLORENCE. DAVID HOCKNEY, P. 77 THOMAS MICHAEL ALLEMAN

The keyhole pattern on the carpet in Lotto's *Portrait of Husband and Wife* falls out of focus. This is caused by a lens, Hockney posits, which cannot focus continuously as does the human eye. He also believes that use of a lens to bring the rear of the carpet into focus introduced a second telltale distortion in the painting.

On a hunch, he experimented with a contraption called a camera lucida, basically a prism mounted on a movable arm. While this technology, invented in 1806, does not actually project an image, Hockney taught himself to look through it in such a way that a small image of a person sitting in front of him seemed to appear on drawing paper held beneath. With practice he was able to draw from life and the prismatic image at the same time.

"It's not easy to use," says Hockney. Nor does it do away with either drawing skill or artistic style. An artist still has to move pencil across paper, so an Ingres drawing made with a camera lucida still looks like an Ingres, while a Hockney looks like a Hockney.

Hockney's curiosity spread to other artists. He began creating what he now calls the "Great Wall," a 70-foot visual time line that starts around A.D. 1150 with Byzantine icons and ends with the works of Cézanne and van Gogh in the 19th century. Along the top half, he and his assistants pinned up color copies of paintings from Northern Europe; images from Southern Europe range along the bottom.

"Caravaggio, Velázquez, Georges de La Tour," he says, gesturing to the wall in his Santa Monica studio, "remind me of film directors. They must have composed their scenes like Zeffirelli, telling models to lift their hands or tilt their faces just so, into the light."

The masters on these walls have caught fleeting expressions, extraordinary detail in feathers and fur, and complex textures in baskets, velvet, fruit rinds and fish scales. "There's no awkwardness," he says, running one finger along a pattern that slithers through the folds of Florentine painter Bronzino's sumptuous fabrics. "You try doing *that* without a guide," he challenges. "It's hard, virtually impossible." It took a working artist, he notes, to draw this conclusion and think through the consequences.

On the far right of his wall, the date 1839 looms large, signifying the year when a chemical means to fix projected images on paper was discovered. For a few decades, painting and photography twined around each other: paintings were made to look like photographs, and photographs were made to look like paintings. By the 1870s, however, artists had turned away from photography and begun to explore other perspectives. The lens, explains Hockney, is monocular and stationary. "But humans don't see like that. We have two eyes, and we move." He lingers over several paintings by Cézanne, who, he says, "looked at the world with both eyes. Which made him doubt the exact whereabouts of things." This fascination with multiple points of view led straight toward Picasso and Braques and to Cubism, which presents figures from many angles at once. Within a generation or two, optical knowledge and skills—closely guarded trade secrets, Hockney believes—were lost.

As, for a time, was Hockney. Theories remain theories until they are proved, and Hockney's ideas were supported only by speculation. Enter Charles Falco, a many-faceted professor of optical sciences at the University of Arizona. Reading the January 31, 2000, issue of the *New Yorker*, Falco was instantly intrigued by an article by Lawrence Weschler reporting Hockney's hypothesis: two Falco obsessions—optical science and art—had crossed paths with significant consequences. After meeting Hockney and scanning the Great Wall, Falco realized that the smoking gun would be found not in the paintings' remarkable accuracy but in their distortions, which could only have been created by the use of a lens.

One painting in particular stood out: Lorenzo Lotto's *Portrait of Husband and Wife*, now in the Hermitage, in St. Petersburg, Russia. Certain details glowed vividly in Falco's mind's eye, including a section of the painting that quite clearly went out of focus.

That doesn't happen with the healthy human eye, Falco now tells me in his high-tech optics lab ten stories above Tucson, Arizona. The eye adjusts its focus continuously—and thus never goes out of focus. A simple lens, however, has a specific, narrow depth of focus. Objects lying outside the range become blurry. He leans forward, talking fast. "I realized that I could calculate the properties of that lens," he says.

Falco found a good reproduction

ERICH LESSING/ART RESOURCE, NY/HERMITAGE, ST. PETERSBURG

from the university library and began calculating. By the time he had finished, it was 2 A.M. "I was toast," he says. He took out his contact lenses, lay down, and was almost asleep, when he sat up and climbed out of bed to look again at the painting. Sure enough, he had seen another aberration.

Lotto's couple sits behind a table draped with an oriental carpet; in the center of that carpet, a keyhole pattern blurs as it recedes from the edge of the table. This was the distortion that originally drew Falco to the painting. Off to the right, a thin border extends back diagonally in a straight line. Now Falco saw that at the same depth where the keyhole pattern goes out of focus, that line shifts direction by three degrees: the result, he says, of moving either the lens or the canvas to refocus.

Refocusing even slightly, though, changes both magnification and alignment. Working on the simple linear pattern, Lotto was able to fudge the line slightly; the change in direction is slight enough to go undetected unless you're looking for it with a straightedge. The more complex keyhole section in the middle of the table presented Lotto with a problem: there was no way to refocus and still make the pattern's edges line up. So, Falco sums up, Lotto let it go out of focus. (Later, artists would cover deep tables with white cloths, to escape this dilemma.)

Neither eyeballing nor geometrically planned perspective produces either type of distortion, but a projection made with a lens accounts for both. "You could convict O.J. with this evidence," says Falco.

"This isn't a story," Falco goes on. "It's not your version versus my version. This is *fact*. This is *science*." You could, he admits grudgingly, come up with another explanation, but it would be a complicated and far-fetched theory. "Or," he brightens, "you can just say 'lens.' Everything fits."

But even to Falco, technological history posed an initial conundrum: Lotto painted his portrait in 1543. A glance along Hockney's wall reveals that the "optical look" stretches all the way back to portraits by Flemish artists van Eyck and Campin. Neither Falco nor Hockney could explain it. That is, until Falco mentioned in passing that concave mirrors can project images. A lightbulb went on. With this insight in mind, Falco turned his office into a camera obscura. Using nothing more high-tech than a shaving mirror, he had soon cast a good-quality image.

The case for the use of optics had just leapfrogged clear back to van Eyck and Campin. In fact, both of these artists famously included con-

DAVID HOCKNEY (2): NATIONAL GALLERY OF ART, WASHINGTON, D.C., WIDENER COLLECTION

Will the real Charles Falco please stand up? To illustrate one technique used by old masters, Hockney patched together portraits of his colleague from photographs taken head-on. In Van Dyck's 1626 portrait (right), the technique could explain the distorted proportions of the mother (note her extremely long legs) and the straight-on perspective of the child (despite the view from below).

vex mirrors in their paintings. In their days, mirror-makers did not back the silvering with a coat of black, as is standard practice today, so these curved mirrors would have been reversible. Pull the convex mirrors from the back walls of van Eyck's *Arnolfini Wedding* or the St. John the Baptist panel of Campin's *Werl Altarpiece*, turn them around, and the result is a concave mirror, capable of projecting an image good enough to paint from.

"Multiple viewpoints create a far bigger space than can be achieved by one," Hockney notes about his *Pearblossom Highway*. The photomontage appears to have a central viewpoint but actually comprises hundreds of different perspectives. Such artistic explorations helped Hockney form his theory about widespread optical use by the masters.

Buy into Hockney and Falco's theory and van Eyck and Campin become as mischievous as Edgar Allan Poe's thief in "The Purloined Letter," who hides stolen correspondence in plain view. The difference here is that the artists' secret tools have been seen but not recognized for almost six centuries.

Hockney's book, *Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters*, published in October, lavishly sets out much of the story, including other ways artists used lenses, and their ingenious methods for wriggling around the limitations and distortions of optical tools. (The BBC documentary, filmed in Ghent, Bruges and Florence, has no U.S. airdate as yet.) In December, the New York Institute for the Humanities sponsored a well-attended weekend symposium examining the validity of Hockney's theory. The verdict? Mixed. Many in the art community raised grave doubts. Based on his own informal experiments, the Metropolitan Museum of Art's Keith Christiansen questioned whether a lens could create an image containing enough detail to be useful. Why, he continued, would artists such as Michaelangelo and Caravaggio, who routinely made freehand sketches before painting, need the aid of blurry, upside-down images? Other objections centered around the ability of early painters to generate enough light with candles to form a strong image. A computer scientist pointed out that the mirror in van Eyck's *Arnolfini Wedding* was not nearly large enough to reflect Arnolfini, his wife and the dog.

Critics also question why none of the models used by the grand masters ever noted or made reference to the use of lenses or mirrors. After all, they were on the scene. Hockney scoffs at this comment. "Can you imagine? A sitter rushing home to write, 'Dear Diary, today I sat for Mr. van Eyck. He used a mirror 5 inches in diameter.' It's preposterous. No: If a sitter saw anything, they'd chalk it up to magic artist stuff." And artists also had good reasons to keep mum. At various times and places, getting caught messing around with mirrors, commonly thought to be the tools of sorcerers, could have meant a death sentence.

These days, both Hockney and Falco are in high demand to lecture about their findings. At a talk sponsored by the Los Angeles Museum of Contemporary Art, a sold-out crowd of 1,200 strains to listen as Hockney explains yet another aberration. Transparent lenses, he says, not only turn images upside down but reverse them left to right: a problem artists didn't face with the older mirror lenses. (Mirror lenses actually reverse images twice, once while focusing and once while reflecting. In this case two wrongs add up to a right.) When artists first moved to using lenses, says Hockney, there were suddenly a lot of left-handed drinkers in European painting, including Caravaggio's Bacchus.

As the audience titters, Hockney projects onto the screen a Dutch painting of two rowdy peasant men, a woman and a lascivious monkey peering up her skirt. "Look at that," he says. "Every last one of them leading with the left hand. Even the monkey. What are the chances that the artist found not only three left-handed models, but a left-handed monkey to boot? Or was he using a lens?"

The crowd bursts into laughter, and Hockney beams. Later, he says, artists learned how to combine lenses and mirrors to re-reverse the images, and everyone went back to drinking with their right hands.

"It's not hard to see," Hockney reflects later in his home in Los Angeles. "In fact, once you see the optical look, it's hard *not* to see it." The great beauty of this discovery, say both Hockney and Falco, is its simplicity. "We're not talking about sophisticated science here," says Falco. "It's baby optics."

"If it's that simple," nods Hockney, "artists will use it."

Freelance writer Jennifer Lee Carrell, a former medieval scholar, wrote last about Arabian horses.

DAVID HOCKNEY/J. PAUL GETTY MUSEUM, CALIFORNIA

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BOSS

THE NEW YORK CITY COURTHOUSE THAT CAUSED HIS DOWNFALL HAS BEEN RETURNED TO ITS FORMER GLORY, AND WILLIAM MARCY TWEED'S ODIOUS REPUTATION HAS LATELY BEEN REFURBISHED AS WELL

BY JONATHAN KANDELL

WHEN THE OFFICIAL CEREMONY capping the restoration of New York City's historic Tweed Courthouse was held last December, the wily rascal who built it was back in the place he loved best—the spotlight. Although he never actually became mayor of New York, William Marcy "Boss" Tweed ruled and plundered the city so shamelessly in the years right after the Civil War that his name became synonymous with corruption and chicanery. But by now Tweed, too, has undergone something of a redo.

"He played an indispensable role because the city was growing exponentially in every direction and needed a politician with a strong hand and a broad vision at the helm," says Kenneth Jackson, president of the New-York Historical Society. Jackson, who is also a professor of history at Columbia University, even compares Tweed to former mayor Rudolph Giuliani. "The city was in such chaos back then that it needed someone—like Giuliani in September—who appeared to be in control."

According to Leo Hershkowitz, the historian who has been Tweed's most emphatic champion, "he was intensely loyal, warmhearted, outgoing, and given to aiding the underdog and underprivileged." Other Tweed authorities wonder whether anybody but a powerful crook could have pulled New York City together in that frenzied time. "Could honest men act as effectively as thieves?" asks urban historian Seymour Mandelbaum. Decidedly not, Tweed himself asserted. "New York politics were always dishonest," he once told a committee investigating him. "This population is too hopelessly split up into races and factions to govern it . . . except by the bribery of patronage and corruption."

Tweed knew what he was talking about. Born in 1823, he grew up on the Lower East Side, which would soon be teeming with immigrants. His father, Richard, of Scottish descent, was an industrious chair maker who provided his wife and four children with a middle-class livelihood. But by mid-century it was impossible to escape the sights, sounds and smells of poverty. Life spilled out from the tenements and shops into the crowded streets. Sewage pipes burst during heavy rains. Pushcarts and horse-drawn wagons paralyzed traffic.

At 47, the dapper pol was at the peak of his power. One short year later, he was finished.

A youthful brawler and school dropout, at age 21 Tweed settled down and married Mary Jane Skaden, the daughter of a brush factory owner, with whom he had ten children. He joined his father-in-law's business and became the leader of the local volunteer fire company. A beefy six-footer, he enjoyed the rowdy bonhomie of the firehouse. He once surprised a colleague with a raucous bachelor party, leading a 25-piece band that awakened the man's entire neighborhood. Tweed "was young and good looking then, with fine dark brown hair and clear, gritty eyes," according to an acquaintance. "He was a tip-top dancer and never [lacked] a partner." But what excited Tweed most was beating rival fire companies to the scene of a fire. Running beside his mates as they pulled their fire wagon, he would blow a trumpet and shout: "Jump her, boys! Jump her lively!"

In those years, fire fighting could be a pathway into politics, a career, Tweed admitted, that was "the only thing I get crazy on." With the backing of Tammany Hall, the notorious machine that had wielded power in

As depicted by cartoonist Thomas Nast, Tweed's imprint on New York was huge.

Manhattan's Democratic Party for years, he became an alderman. Elected to Congress, he quickly grew bored in Washington and decided his future looked brighter back home. "As to spending my time hearing a lot of snoozers discuss the tariff and . . . the mails from Paducah to Schoharie, I don't think I'm [up to] doing that," he told a friend.

The New York City he returned to in 1855 had 630,000 inhabitants, more than half foreign-born, including 175,000 recent arrivals from Ireland and another 95,000 or so from Germany. Native-born New Yorkers recoiled from the mass of destitute newcomers, but Tweed viewed them as his natural constituency. After he was elected to the Board of Supervisors, which oversaw the financing of public projects throughout the city, he was able to court immigrants with jobs, welfare and street repairs. All he asked in return was their votes.

Meanwhile, Tweed was beginning to demonstrate the potent blend of gall and guile that would eventually boost him to Tammany's top tier. Presiding over a meeting to choose the Democratic nominee for a minor civil post, he realized that his own candidate would lose in an open vote. "Said I to the secretary: 'Have a motion made to dispense with the calling of the roll,'" Tweed later recalled. He then asked all in favor of his candidate to shout aye. "Carried! The meeting is adjourned!" yelled Tweed. Pandemonium broke out, and a pistol-waving delegate threatened to blow Tweed's head off. "I was scared, but I didn't say so," said Tweed, who managed to keep the gunman at bay just long enough to get away.

The Civil War widened the breach between the city's haves and have-nots. The well-to-do could pay others to take their place in the army ranks, but the poor were saddled with conscription by lottery, and they rebelled. In July 1863, draft rioters battled police, looted and burned shops and homes, and lynched blacks. It took days to quell the uprising, which left hundreds dead and dozens of buildings destroyed.

The Board of Supervisors, urged on by Tweed, came up with an acceptable alternative to conscription, promising to pay some 30,000 "volunteers" $777 each for military service, a sum equivalent to about two years of an average worker's salary. The clever plan was financed not by raising taxes but by loans from banks and the state.

The end of the Civil War brought a dramatic upturn in New York's fortunes, but huge sums of money had

Nast's devastating caricatures in *Harper's Weekly* helped reformers get Tweed.

CORBIS (2); P. 85 GRANGER COLLECTION

Tweed ran Tammany Hall (in foreground) when it hosted the Democrats' 1868 national convention that nominated Horatio Seymour.

to be spent for new railroads, streets, docks, warehouses and offices. Tweed placed several cronies—the so-called Tweed Ring—in key city posts. They included the former District Attorney, A. Oakey Hall, a silver-tongued playwright and actor who became Tweed's handpicked mayor. But just as important were the people he had placed on the Board of Supervisors. "Pretty nearly every person who had business or furnished supplies for [city] works had a friend in the Board of Supervisors . . . ," Tweed later acknowledged.

In 1867 Tweed got himself elected state senator. By his own account, it cost him about $600,000 in bribes to convince the Senate to pass a charter granting a degree of home rule to the city, which gave New York more control over its budget and its ability to raise money.

It also vastly expanded Tweed's power, and much of it he wielded compassionately. He poured huge amounts of public funds into Catholic schools and charities. He improved water supplies, sewage disposal and streets. And because Central Park was far removed from most immigrant neighborhoods, Tweed built smaller parks nearer the poor. "He provided food and coal at Christmas, took women and children on summer boat rides, intervened on behalf of those who got in trouble with the law, and found jobs for people," says Mike Wallace, a historian at John Jay College of Criminal Justice in New York and coauthor of *Gotham: A History of New York City to 1898*. "But he was using the immigrants to consolidate his power base."

Tweed also reached out to the affluent. "He helped the elite with their cultural institutions," says Thomas Bender, an urban historian at New York University. "We wouldn't have the Metropolitan Museum of Art or the American Museum of Natural History had he not manipulated the state legislature to pass their charters."

Tweed managed this without raising taxes. Instead, the city issued bonds. New York's debt nearly tripled in four years. Most of it was held by banks and trust companies, and as old bonds fell due, new ones were issued to pay for them.

There was a huge hidden cost built into New York's development: the "commissions" charged by the Tweed

MUSEUM OF THE CITY OF NEW YORK

Tweed's courthouse at 52 Chambers Street (still under construction in an 1871 illustration) was built largely by Irish laborers.

Ring. Contractors doing jobs for the city were asked to hand in vastly inflated invoices for their work and then allowed to collect 35 percent of the total. Tweed, who had by then been chosen Grand Sachem, or leader, of Tammany, himself kept 25 percent, and the remaining 40 percent was doled out to associates. The Boss insisted that the bulk of his take went to pay off bureaucrats, politicians and judges as part of the cost of getting things done. "It was a time when there was no professional civil service or control over budgets," says Kenneth Jackson. "Tweed sort of ran the city like I run my house: Money comes in and out—and who knows where it's going?"

Tweed had other sources of enrichment, not the least of which were the political favors he did for such notorious robber barons as the financier Jay Gould and railway magnate Cornelius Vanderbilt. Gould, in return, rewarded Tweed with a seat on the board of his Erie railway.

But Tweed took special satisfaction from the times when the city's most upstanding businessmen had to swallow their pride and plead for his help. As Tweed later related, in 1868 construction of the Brooklyn Bridge was held up because Manhattan's $1.5 million share had not been approved by the Board of Aldermen. The head of the bridge company, Henry Cruse Murphy, was desperate. Tweed agreed to meet him. It would take $55,000 or $65,000 in bribes, Tweed told Murphy, to get the aldermen to pass the bridge appropriation. Murphy agreed and soon, or so the story goes, a bag with cash was sent to Tweed's office. Construction did not proceed, however, until the Boss himself had received 560 shares of Brooklyn Bridge stock worth $56,000, plus a seat on the board.

Tweed enjoyed flaunting his wealth. A story is told that one Christmas Tweed gave $50,000 to a Lower East Side immigrant district. He had initially announced a $5,000 donation but upped the ante when a judge shouted: "Oh Boss, add another naught to it." Tweed bellowed with laughter. "Well, here goes," he said, writing in the new amount.

He was an extravagant, exuberant host. His brawny good looks vanished as his body bloated to nearly 300 pounds. But at a Tammany Hall celebration, he was still agile enough to lead the party regulars in a mock tomahawk procession into the banquet room. He is said to have had his daughter's wedding done by Delmonico's, the legendary restaurant, for

MUSEUM OF THE CITY OF NEW YORK

$13,000—almost twice his official yearly salary as a public servant. He kept a large country house in Greenwich, Connecticut, and entertained intimates with lavishly catered cruises on his two steam-powered yachts.

The collapse of the Tweed Ring came with unexpected swiftness in 1871. The cause was a spectacular boondoggle—the building at 52 Chambers Street in Manhattan that would soon be dubbed the Tweed Courthouse. Nearly a decade after work on it had begun in 1862, the courthouse still was not complete. Tweed, who as commissioner of public works was in charge of the project, declined to release budgetary details. Then, an obscure politician, James O'Brien, embittered because Tweed had failed to give him a satisfactory share of city graft, turned over the secret books to the *New York Times*.

The *Times* published a series of scathing stories on huge cost overruns. Among the revelations: the marble for the courthouse came from a quarry partly owned by Tweed. He and his cronies apparently felt so secure about bilking the city that they occasionally indulged in bits of sly humor. For example, a $33,283 check made out to one Fillipo Donnarumma was endorsed by "Phillip F. Dummy." Another check was paid to the order of "T. C. Cash."

And yet, in its design and materials, the courthouse was first-class all the way. "When you look at the quality of the stone and cast iron and stained glass and the attention to detail," says John Waite, the architect in charge of the building's recent restoration, "you have to conclude that even though Tweed may have taken a lot of money out of the construction, he still left behind one of New York's great landmarks."

Be that as it may, the courthouse scandal confirmed rumors that New York was borrowing excessively and

"Tweed may have taken a lot of money but he left behind one of New York's great landmarks."

that only a fraction of the money was making its way into tangible improvements. Banks refused to endorse new securities, and the city's credit rating plummeted. Even politicians who were deeply beholden to Tweed realized they had little choice but to turn their backs on him.

By then the press had transformed Tweed into a pariah. At the head of the pack was Thomas Nast, the *Harper's Weekly* cartoonist, who depicted the Boss as a leering, ham-fisted, obese giant swathed in garish three-piece suits. A rabid anti-Catholic, Nast was especially biased against the Irish, invariably portraying them as drunks with unshaven, apelike faces. Tweed feared Nast's acerbic cartoons more than he did the *Times*' stinging tirades. "I don't care a straw for your newspaper articles—my constituents don't know how to read," the Boss reportedly was driven to complain. "But they can't help seeing them damned pictures."

On October 26, 1871, Tweed was arrested on multiple charges. Not long after that, he was ousted from Tammany after landslide losses by the machine's candidates. As it turned out, it took two trials but prosecutors were able to convict Tweed for failing to audit claims against the city. That and a civil action to recover the city's money were enough to keep him in jail for many of his remaining years. Suffering from diabetes and a heart condition, he died at age 55 on April 12, 1878, in the Ludlow Street Jail, a relatively comfortable facility he had helped finance a decade earlier.

On the day of Tweed's funeral, thousands gathered to pay their respects in front of his daughter's house on East 77th Street, where the coffin awaited transfer for burial. At the Tweed family plot in the Green-Wood cemetery in Brooklyn, news-

Restoration work included repair of the elegant marble leaf-and-scroll capitals.

More than $2 million was spent to replace and repair the courthouse's flooring.

Marble sculptor Shi-Jia Chen worked on the north facade's ornate Corinthian capitals.

SUZANNE DECHILLO/NYT PICTURES (3)

Removing decades of paint from the brickwork in the rotunda revealed the meticulous craftsmanship of the original builders.

paper reporters noted that most of the nearly 1,500 mourners present at the interment were poor New Yorkers who had somehow arranged round-trip transportation to that rural cemetery. No elected official of importance showed up.

Notwithstanding efforts by some historians to give Tweed his due, his ill repute lives on. Indeed, only a Republican mayor—Rudolph Giuliani, in 1999—could have approved the restoration of the courthouse, says John Dyson, Giuliani's adviser on the project. "The Democrats were too scared to take on something like this because it was linked to Tweed."

The building was used as a courthouse until 1926, after which it housed municipal offices. Located just behind City Hall, within a half mile of the site of the World Trade Center, it was pressed into service after September 11 as a rest and command center for firefighters and other rescue workers. Though covered with dust when the twin towers collapsed, it suffered no structural damage. Scraping away more than a century of grime and paint has revealed the sumptuous Tweed-era marble and multicolored brickwork on the walls and 28-foot-high ceilings. A spectacular laylight with flowers, birds, frogs and squirrels painted on amber-, ruby- and emerald-tinted glass has been replicated based on fragments of the original window found throughout the building. On the exterior, master stoneworkers, some of them born in China and trained in traditional masonry schools there, have extensively repaired the Neo-Renaissance pilasters and column capitals, whose cracked stone acanthus leaves were hanging precariously three stories above the street.

If Tweed has been watching the courthouse goings-on from some precinct clubhouse in the sky, it surely has not escaped his attention that the cost of the restoration—some $85 million—has turned out to be more than double the initial estimate. City officials say the building was in far worse shape than they thought.

The refurbished courthouse will not be used as such. Instead, sometime in the next two years, the Museum of the City of New York will relocate there from its current premises on upper Fifth Avenue. According to city officials, the museum, famed for its collections of historical photographs, costumes, furniture and decorative objects, will have to spend some $40 million more—before overruns—to turn the courthouse into a suitable venue for exhibitions. And with that, Tweed's monument to graft will become the main showcase for New York's proud history.

The author's work has appeared in Architectural Digest *and the* New York Times.

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Trouble in Paradise

THE IDYLLIC MEDITERRANEAN RETREAT OF CORSICA, WHERE SEASIDE VILLAGES AND RUGGED SCENERY BECKON, ALSO HARBORS HOMEGROWN TERRORISTS, BENT ON ACHIEVING THE ISLAND'S SECESSION FROM FRANCE

BY ROBERT WERNICK

"IN CORSICA," SAID THE GAS STATION ATTENDANT, "we give directions more often in terms of up and down than of left and right. If you want to see the country, go along the coast in either direction, and when you see the chance, go up."

Corsica is a 3,300-square-mile fist of fractured rock, all shapes and sizes and colors of it, some of it rising straight out of the sea, some of it towering more than 6,000 feet high, all of it crisscrossed by gorges and precipices. I was negotiating one of the more spectacular hairpin curves on one of the roads that snake their way through this spectacular scenery, when my path straightened to reveal a sizable herd of pigs ambling across the road to gnaw at some underbrush.

"That is the way it has always been in Corsica," said a man at the next table at the village restaurant where I stopped for lunch. "We have always let our domestic animals run wild over the countryside, with nothing but a tag pinned to their ears to let everyone know who they belonged to."

He told us we had to try the Corsican sausage. "There is nothing like its taste anywhere," he added. "It comes from the plants the pigs eat, the Corsican plants." He was referring to the maquis, the dense, tangled thicket of scrubland that covers a good half of the island and suffuses it with a bittersweet smell.

The sausage was indeed delicious, and it led the conversation naturally to an item in the morning newspaper about a man arrested for shooting two of his neighbor's pigs for chewing up all the flowers in his garden. The restaurant's owner was indignant that the French government, which he considered an alien power that had feloniously bought his island a mere 234 years ago, should be interfering in the private affairs of two Corsicans.

"What I don't understand about the whole story," said my dining companion, "is, why did that man shoot the pigs? Why didn't he shoot the *neighbor*?"

He was half smiling, but as he and the restaurant owner were eager to explain, a generation or so ago the law of the vendetta was still going strong. "Vendetta" is the only Corsican word to have passed unchanged into the dictionaries of most of

Corsica's postcard-perfect exterior (left, the harbor of Bastia) belies a tumultuous past and an ongoing guerrilla campaign. A penchant for conflict also characterized the island's native son, Napoléon Bonaparte, born there in 1769.

Smithsonian Journeys

Touring in 1765, diarist and Samuel Johnson biographer James Boswell (outfitted in traditional Corsican attire he commissioned during his journey) was transfixed by the same "wild mountainous rocky country" that attracts two million visitors annually.

the world's languages. The vendetta code provides that an assault on a family's honor must be repaid in blood, and that blood repaid in turn until one or both of the families are exterminated. In 1954 a donkey belonging to one man destroyed another's garden, who castigated the donkey's owner. The donkey owner then shot the garden owner. And in the following years, there were several more violent deaths, though not anything like the 17 killed, some decades earlier, in a dispute over which family owned a chestnut tree growing out of a wall dividing their properties.

"These may seem like frivolous pretexts to you," said my companion in a stern, even voice, "but never forget that the vendetta was, for thousands of years, our only law, the only law a Corsican could trust." Over the centuries, he went on, various invaders—Greeks, Etruscans, Romans, Ostrogoths, Vandals, Lombards, Byzantines, Arabs, Pisans, Aragonese, Genoese, French, English, Germans—all tried to conquer Corsica, "to plunder us and tax us and sell us into slavery, but never subduing us entirely, we were never serfs, we never worked for them. They put us under foreign laws, with crooked judges, but we had our own honor, every family up on every desolate mountainside had its own honor, and honor means more to us than life. That is what the vendetta meant, its judgment was sure, and that is why we could let our pigs run free, knowing that no one would dare to steal one. That was why our family life remained pure, for if a man so much as touched the scarf that bound a woman's head and did not propose marriage immediately, he was dead by nightfall. As your great British writer, James Boswell, put it, 'Better occasional murders than frequent adulteries.' "

The restaurateur interrupted. "There was one moment when we were a free people," he said, "the only free people in Europe, in the world. And all thanks to that man." He gestured to a portrait on the wall, of a sturdy handsome man in an old-fashioned uniform. "The father of his country," he said. "Pasquale Paoli."

KAREN SCHULENBURG/LIAISON INTERNATIONAL; GRANGER COLLECTION

In 1765, James Boswell felt himself to be among a "primitive race of men who ran about in the woods eating acorns."

I was unwilling to admit that I had never heard of Mr. Paoli, though I later learned that not only had Boswell extolled him, but Benjamin Franklin had hailed him and his soldiers as "brave assertors of Civil Liberty." Even those unruly hotheads who were preparing to launch the American Revolution toasted Paoli in a tavern outside Philadelphia named for him.

Beginning in 1752, Paoli called on the families of Corsica to throw out the forces of the Most Serene Republic of Genoa, a city-state of tightfisted merchant princes that had ruled the island for almost 200 years. In 1755, Paoli created an independent republic with a democratic constitution. Alas, it lasted just 14 years, until 1769. The Genoese, still entrenched in a few coastal areas and tired of all the trouble, sold the island for a trifling amount to the government of King Louis XV. (France had always been on the lookout for a secure naval base in the Mediterranean.) Paoli was defeated in battle; he would die in exile in London. Since 1769, the island has remained, almost exclusively, a part of France.

The restaurateur is among the small, but noisy, minority who want to drive the French out and restore independence. "We would welcome them back," he observes amiably, "—as *tourists*." And come they will. A combination of snow-covered peaks and favorable winds guarantees Corsica, alone among the Mediterranean lands, enough water to keep the whole island green with an extraordinary profusion of plants throughout the year. There are chestnut and oak and pine forests, rounded grassy hilltops, olive groves and vineyards, rugged gorges and giant rocks sculpted into fantastic shapes by the erosion of wind and wave. If he climbed high enough and had a bit of luck, a tourist might catch sight of the endangered mouflon, a long-horned wild sheep, leaping from crag to crag, or a rare species of vulture. If she went low enough, she might find a gem of a secluded cliff-girded beach.

Boswell himself was among Corsica's very first tourists, in 1765. Transported by what he saw, he felt himself to be among a "primitive race of men who ran about in the woods eating acorns and drinking water."

Life did not change much during most of the years following his visit. The French introduced maps and paved roads and a police force, but the isolated communities, tightly knit families and clans remained, proud and solemn and severe and poor. Little by little, however, the splendid isolation was eroded by modern inventions and modern wars. With the dawning of relatively cheap airfares in the 1970s, the rate of change became torrential. The handful of English adventurers and American millionairesses and writers and artists (like Edward Lear, master of the limerick) who used to pop in looking for exotic locales have largely been replaced by two million-plus middle-class tourists. These travelers debark each year at the airports and seaports of an island that now devotes 90 percent of its economy to cosseting them.

It is Corsica's good fortune that after World War II tourism grew gradually and gave the French government time to put building codes in place and to designate almost half the island as a national park. There, devoid of all development, rare species of plants and animals have been preserved. In fact, once you leave the few narrow strips of coastal plain, there are no billboards, no honky-tonks, no garages, no supermarkets, no tall buildings anywhere on Corsica.

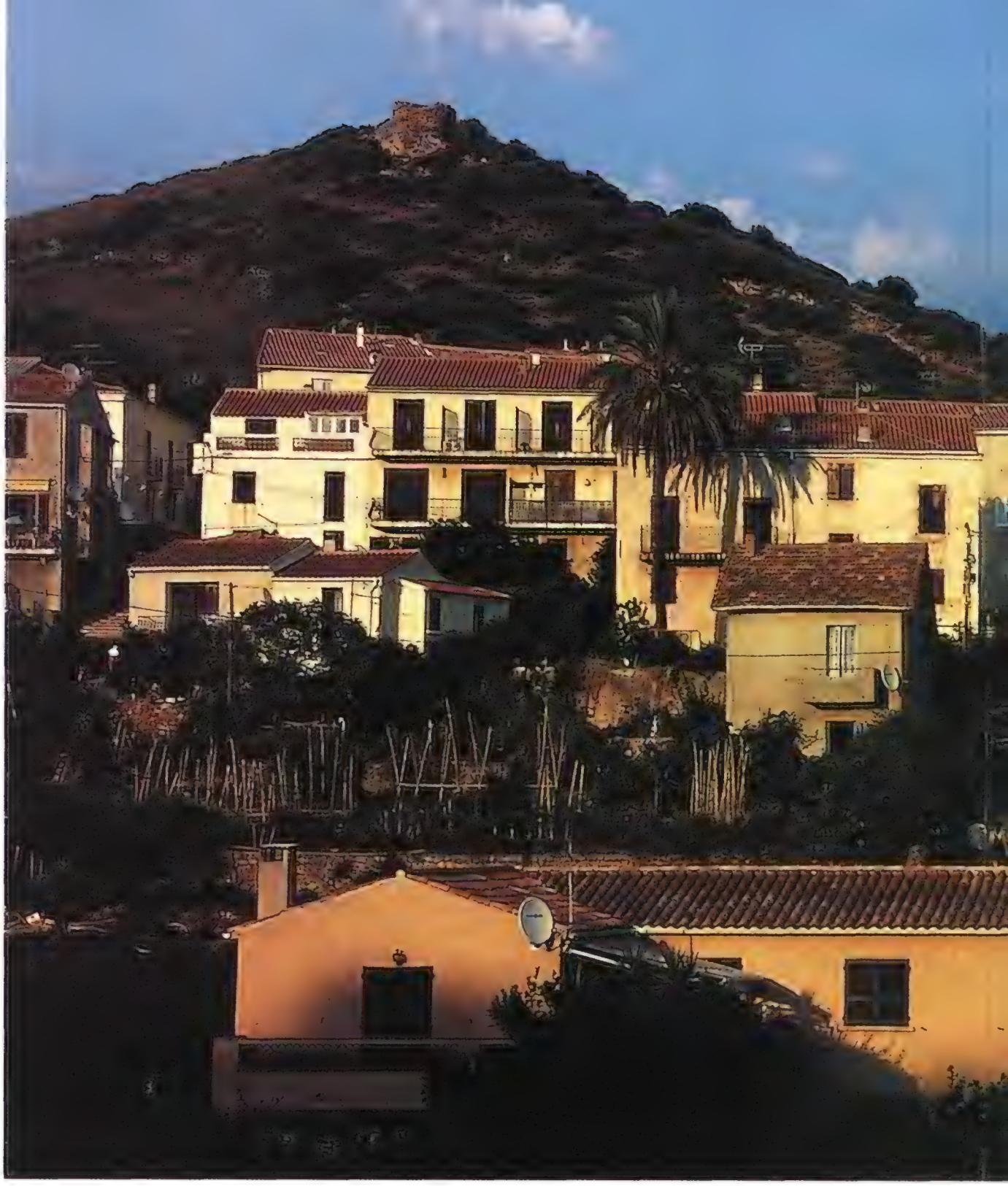
No wonder that for the millions of motorists, hikers, surfboarders, scuba divers and sunbathers who visit each year, the island has offered the kind of laid-back, picturesque vacationland they dream of. And for its 260,000 inhabitants, tourism has meant a massive inflow of cash, drugs, traffic jams and satellite dishes.

Long gone are what the maquis was most famous for in the old days: bandits,

Napoléon Bonaparte (top, depicted as a classical emperor in the city of Ajaccio, his birthplace) departed his native soil to indulge a taste for conquest. Freedom fighter Pasquale Paoli (bottom) devoted himself to the cause of Corsican independence. When James Boswell visited the island and met with Paoli, the British traveler declared himself to be much impressed by the charismatic leader's "sensible, free, and open countenance" and "noble carriage."

KEVIN SCHAFER; GRANGER COLLECTION; P. 92 JOHN MILLER/ROBERT HARDING PICTURE LIBRARY; P. 93 CHATEAU DE VERSAILLES, FRANCE/GIRAUDON/BRIDGEMAN ART LIBRARY

Perched on a granite outcropping above steep cliffs, the village of Cargèse, established in the 18th century by Greek refugees fleeing Turkish rule, boasts antique charm and uncharacteristically pacific traditions. Congregants attached to the settlement's two churches, one Roman Catholic and the other Greek Uniate, have transcended traditional enmity to coexist harmoniously. Travelers to the unspoiled town will discover a tranquil central square, thriving outdoor market, cafés, artisans' studios, shops and, as one observer found, "an atmosphere of gaiety and liveliness."



MICHEL GOTIN/COHSE SUD AJACCIO; KAREN SCHULENBURG/LIAISON INTERNATIONAL

which in Corsica is not necessarily a term of reproach. Like Robin Hood in England, many Corsican bandits were seen as heroic resisters of alien oppression. In the trackless tangle of the maquis, bandits could be safe from the authorities. The most heralded—*bandits d'honneur*—were those who followed the vendetta's honor code, some of whom became national heroes.

The bandits may be gone, but the pastoral life lives on. Up in the mountains in summer you will find shepherds and goatherds with their flocks, hardy gun-toting men, much as Boswell described them, "lying at their ease in the open air, recounting tales of the bravery of their countrymen." I once came across some shepherds performing the ancient tradition of the musical duel, in which two men alternate a rhyming line until one of them runs out of ideas or rhyming words. They were finally interrupted by the ringing of one of their cell phones.

Coming down from the mountain pastures to Corsica's biggest city, Ajaccio, you have to cross the roaring Liamone River, where, in 1769, one of the decisive events of Corsican and French history took place. Among the Corsican patriots fleeing the disastrous battlefield of Ponte Nuovo, where Paoli's cause was lost forever, were Paoli's personal secretary—a lawyer named Carlo Buonaparte—and his very pregnant young wife, Letizia. While crossing the river, swollen by the spring thaw, Letizia's mule lost its footing and was swept into the current. Her husband shouted to Letizia to let go of the reins and head for the bank, but she refused to abandon her steed and pulled harder on the reins. Finally, she managed to lurch the

Taken up by separatists, the ubiquitous emblem known as the Moor's Head (here emblazoned on a boulder) recalls a Corsican nobleman's defeat of Saracen—or Moorish—invaders during the 11th century. Many islanders decry the violence that has continued to mount since factions insisting on independence have begun warring among themselves. "Disarming the gunmen," one local peace activist has avowed, "should be done in parallel with the granting of regional autonomy."

mule over to a firm footing and then up the bank. Three months later, safe at home, she gave birth to her second son, who was christened Napoléon.

It is no small irony that had Napoléon been born a few years earlier, he might well have grown up a Genoese general; a few years later, he might have become a great commander for the English. As it was, he was born a Frenchman—his father, seeing the way the wind was blowing, Frenchified his own name to Charles Bonaparte and served his new masters so faithfully he was able to wangle a scholarship for little Napoléon to a French military school—the first rung on a ladder that would lead the boy to become the greatest French general of all time.

And it was Napoléon who, though he showed little interest as emperor in his native island, ensured that Corsica remained an integral part of France. Additionally, Napoléon made Corsica a part of the centralized French state, which is what it has remained down to this day, forming one (currently two) of France's 100-odd *départements.*

This arrangement has given the Corsicans more years of peace and prosperity than they have known since the fall of the Roman Empire. It has also allowed them to quit their poverty-stricken shores and to go abroad as something other than mercenary soldiers or slaves—making good in the French

ANDREA PISTOLESI

The forests of the mountain valley of Niolu, flanked by the island's two highest peaks, are covered by dense stands of black pine, hundreds of years old. Hikers to this region find themselves in Corsica's remotest corner. "This high blue shining plateau, circled by towered ranges," writes Dorothy Carrington, author of a classic account of island life, "evokes no associations except, perhaps, travellers' tales of Tibet."

Army or government or business. Or in organized crime, where the mythology of the French underworld is as full of Corsicans as America's is of Sicilians.

There are monuments to Napoléon everywhere, especially in his birthplace, Ajaccio. Perhaps the most impressive is the palace built by his step-uncle Cardinal Fesch to house the hundreds of masterworks of Italian painting Fesch scooped up in the wake of his nephew's victories in Europe.

In downtown Ajaccio, just around the corner from the emperor's birthplace, resides Dorothy Carrington, author of *Granite Island*, arguably the best book ever written about Corsica. Now in her 90s, she is still casting a vigorous eye on the island she fell in love with on her first visit in 1948, a time when women were not allowed to sit on café terraces. If they wanted to gossip with their friends and show off their Paris dresses, they had to promenade under the baleful eyes of men dressed in black who sat on those terraces, fingering revolvers stuck into their waistbands and talking in solemn tones about local politics.

Not long after she arrived on the island, she visited a man who had found some odd-looking stones on his farm near the village of Filitosa. The stones appeared to be prehistoric sculptures, a supposition later confirmed by an archaeologist who told her they were giant statues (menhirs) of warriors of the megalithic period (about 3000 B.C.). Today, the farm at Filitosa is recognized as an archaeological site of world importance, and the righted menhirs gaze forbiddingly down on visitors lured to this out-of-the-way fold of the mountains.

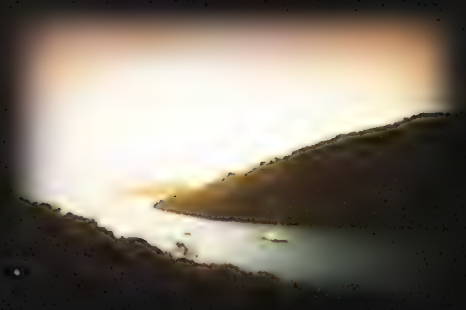
Like other peripheral outposts, Corsica has seen the rise of revolutionary groups demanding a return to a highly romanticized past. And although most every Corsican now speaks French, thanks to compulsory military service and compulsory education, there has been a determined resurrection of the Corsican language, now taught in the public schools. There has been a revival of the old polyphonic Corsican music and ancient handicrafts, and in the mountains, unseen hands scrawl the Corsican spelling of villages on highway signposts.

The chain of events that brought matters to open conflict began in 1944, when the United States Air Force sprayed DDT across a vast stretch of derelict malarial swamp on the island's east coast in order to build a bomber base. After the war, no Corsican wanted anything to do with what was now considered despoiled land. Then, in 1962, Algeria became independent. The French farmers there, known colloquially as *Pieds-noirs* (black feet)—many of Corsican descent—relinquished their land. Some 17,000 of them resettled in Corsica. They drained the swamps and brought in tractors and insecticides. Many made fortunes turning the plain to fertile land.

But most Corsicans, for whom the cutting edge of agricultural technology was still a plow pulled by a mule, were furious. The ancient island hostility against intruders was now turned on the Pieds-noirs and the thousands of Moroccan laborers they imported to work their fields. During a demonstration in the town of Aleria in August 1975, two policemen were killed, setting off a wave of sporadic shootings and bombings that have sputtered along ever since.

Perhaps a hopeful augury can be found in the little town of Cargèse on a beautiful cliff-bound bay on the west coast. Here, 300 years ago, the Genoese settled several hundred shepherds from the wildest mountains of Greece. Separated by reli-

ANDREA PISTOLESI



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In Cargèse, there was not a gun in sight. This does not mean there are no hooded men hoarding weapons in desolate ravines.

gion and language, Greeks and Corsicans shot at each other, burned each others' houses, year after bloody year. As they gradually quieted down, they consented to live side by side, but their lives remained compartmentalized. Each went to his or her own Greek Uniate or Roman Catholic church, avoiding contact in daily life. But as the years lengthened into centuries, the old hatreds subsided. Though the Greeks and Corsicans of Cargèse still worship separately, they speak Corsican and French (Greek is forgotten except in religious ceremonies), and they shop and eat and drink and dance and do business together.

Today, that business is mostly tourism. When I passed through Cargèse last summer, people from a dozen lands, most of whom had never heard of Pasquale Paoli, chatted in cafés and headed for the beaches. The two churches stood on neighboring hills, doors open to all. There was not a gun in sight. This does not mean, however, that there are no hooded men stocking up on weapons in desolate ravines up in the hills.

It took the Greeks and Corsicans of Cargèse three centuries to forget their ancient grievances and learn to live in relative harmony. How long it will take the current crop of revolutionaries and the French government to do the same is anybody's guess.

Painful negotiations over recent years, occasionally accompanied or interrupted by murders of French officials, or leaders of rival groups seeking independence, may or may not be moving toward compromise. A negotiated truce would likely give Corsica a certain amount of autonomy while it remains firmly part of the French Republic. Most Corsicans I know would welcome such an arrangement, but there are those who want all or nothing—total independence. They are only a few fanatics, but the world has all too painfully learned what a few fanatics can do to nations small and great.

Frequent contributor Robert Wernick is a freelance writer who is based in Paris.

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"I conceived a design of visiting the island of Corsica," James Boswell wrote in 1765. Care to follow in his footsteps and explore this land of beauty and banditry?

THOUGH THE YOUNG Boswell had to help row his Tuscan vessel across the Ligurian Sea to Corsica, these days you shouldn't break a sweat getting to the island. Air France flights arrive daily at airports just outside Bastia and Ajaccio. Car ferries cross from Genoa and Livorno, Italy, and from Marseille, Nice and Toulon, France.

THE TRICK IS IN the timing; you may want to avoid the peak tourist season—mid-June through August—when crowds are daunting. But once there, no matter if every other tourist knows about it, the three-hour journey on the narrow-gauge railway between Bastia in the north and Ajaccio in the southwest is a must. The train travels through the mountainous interior, past rocky chasms, over viaducts and through forests of all kinds. Of course, the train is obliged to stop every so often so that cows can cross the tracks.

SO WHAT ARE THE RISKS? Separatist violence has yet to affect tourists, and a visit to Corsica is probably just as safe as a trip to Paris or London.

◆ **INSIDE TIP:** You absolutely must taste the pork sausage (*figatellu*). Grilled over a wood fire, it's a rustic dish imbued with the flavor of wild chestnuts that the island's free-ranging animals feed on.

◆ **CHOICE COLLECTIBLE:** Look for recordings of the haunting polyphonic, a cappella Corsican music. Two noteworthy professional singing groups are A Filetta and I Muvrini.

◆ **YOU SHOULD KNOW:** Corsicans are sensitive about the Genoese period in their history; never suggest that their language sounds Italian.

◆ **FOR THE GOURMAND:** In Murato, 25 miles southwest of Bastia, at the restaurant Campo di Monte (011 33 495 37 64 39), you can eat Corsican veal from calves the owner raises himself.

ELIZABETH WOLF

A Castle

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PRESENCE OF MIND

The Artful Dodger

LANDSCAPE PHOTOGRAPHER ANSEL ADAMS, BORN 100 YEARS AGO, ALSO PUT ON A GREAT SHOW

AN APPRECIATION BY KENNETH BROWER

Adams claimed he had the ability to "see" the final print even before he took the picture.

ANSEL ADAMS IS IN HIS BATHROBE, framed by the interior window of his bedroom loft. There is magic in a frame, as he knew better than most. A frame focuses attention on the elements within, setting them off from the rest of the universe. It makes composition possible. Perhaps this is why the image has stuck with me all these years: our greatest framer, framed.

"Be right down!" Adams calls to us in the living room. His face is wide, his head bald, his nose twists sharply left. This master composer of images is a singular composition himself. The year must be 1957 or 1958. That would make Adams, who was born February 20, 1902, around 55 and me about 12. He jokes with my father, then laughs. It was outside this house, built on the San Francisco dunes, that the great earthquake of 1906 threw young Ansel on his face, breaking his nose and forever giving his voice a clogged, adenoidal quality.

The bathrobe embarrasses me a little. A bathrobe in mid-afternoon is not how we do it at our house. It suggests that the artistic life is different in ways I have yet to learn. Adams barks a final "Ha!" and disappears.

We had come to Adams' to make publishing history. We—or they, my father, Adams and his longtime collaborator, writer Nancy Newhall—were embarking on an experiment that would punish coffee tables around the world.

Ansel Adams was the greatest landscape photographer of our time—a master of technique, a dedicated teacher and a genius of printmaking art. He was also one of photography's most influential innovators. As a young man, he devoted himself to the overthrow of the Pictorialists, a school of photographers who produced blurry, allegorical, "poetic" prints in an effort to look painterly. Adams believed in "clear images, smooth honest papers, and the complete absence of affected imitation of other art forms."

My father, David Brower, was one of the environmental movement's most influential innovators. As the first executive director of the Sierra Club, he wanted to transform Adams' stirring exhibit, "This Is the American Earth," into a book. In 1955, I had witnessed the hanging of the exhibit for its opening at the Sierra Club's LeConte Memorial Lodge, in Yosemite Valley. More than half the photographs were Adams'; the rest, the work of others.

Like the show, which was destined to tour the United States and the world under the auspices of the Smithsonian Institution and the United States Information Agency, the book would open with one of Adams' most celebrated images, *Sierra Nevada from Lone Pine, California*. In this panorama, all darkness and light, a horse grazes under foothills in deep shadow and a luminous arc of peaks in the sun. "This is the American earth," the text began. "This, as citizens, we all inherit. This is ours, to love and live upon, and use wisely

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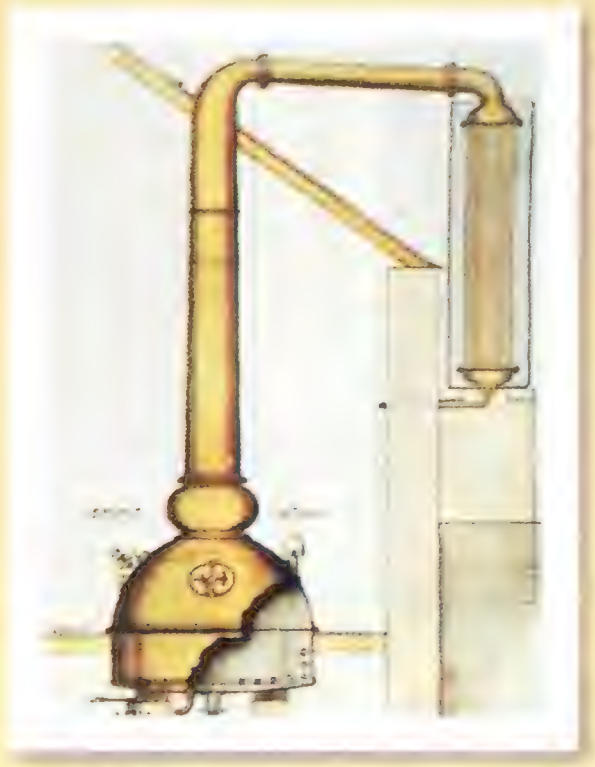
down all the generations of the future."

At the Adams house in San Francisco, the photographer, the writer and my dad set out to somehow fit the exhibit's spaciousness between hard covers. The images had to be large enough for the eye to travel around in them, as it does in the real world. So the principals settled on a trim size of 10 1/4 by 13 1/2 inches—enormous by the standards of book publishing in those days.

Neither Adams nor Newhall had much interest in children, and my father, when his creative juices were flowing, had an uncanny ability to shut small voices out. That suited me fine. I became a fly on the wall—or one at the edge of Adams' big table, where the pictures and text were laid out. I was witnessing a critical moment in the evolution of a genre, the oversize photographic nature book.

It was great fun to watch until late in the afternoon, when the martinis were stirred and the three collaborators closed up shop for the day. Newhall, Adams and Brower knew they were onto something big. Their intuitions were right. *This Is the American Earth* would become a sensation. Supreme Court Justice William O. Douglas called it "one of the great statements in the history of conservation." It sold 25,000 copies in hardback and another 50,000 in paperback. It launched the soon-to-be-famous Exhibit Format Series, which eventually ran to 30 volumes and spawned a whole industry of imitations.

In the projected tenth volume, *Not Man Apart*, photographs of the Big Sur coast by Adams and others were to be juxtaposed with the poetry of Robinson Jeffers. The original editor, a poet, had trouble uniting the materials. I was drafted, at the end of my freshman year at Berkeley, to replace him. My only qualifications were an intention to major in English, consanguinity with my father and grounding in "the religion," as my father called environmentalism.



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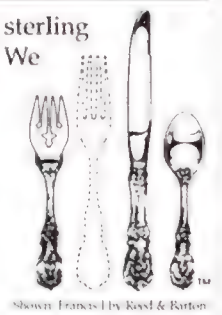

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Moonrise, Hernandez, New Mexico (on wall and party cake) is Adams' best-known image.

After I had selected some verse from Jeffers, I drove down to Adams' new house in Carmel Highlands, at the gateway to Big Sur. Working out of a downstairs guest room, I spent two weeks scouring the region for photographs, visiting Steve Crouch, Morley Baer, Wynn Bullock, Brett and Cole Weston and other cameramen of the coast, returning to the Adams place each evening.

It was a wonderful house. The ceilings were lofty. Tall windows overlooked a seascape of rocks, surf, kelp and a wide arc of the Pacific. On one side of a dividing wall was a workroom; on the other a gallery displaying big prints. You had never seen an Ansel Adams print until you saw one of those—the stark blacks, the dazzling whites and the masterful control of half-tones. "The negative is the score, and the print is the performance," he was fond of saying.

The musical analogy was no mere conceit. At the landward end of the gallery was a Mason & Hamlin grand piano. Adams had trained for a career as a musician, and he played beautifully well into his 60s, despite the arthritis in his hands.

Near the house was a roofed carport. Parked inside was a woody station wagon with a huge platform on top. When Adams could not find a promontory to climb, he ascended a ladder and set up his tripod atop the deck. He believed the elevation of the platform, by expanding the view of his foregrounds, made all the difference in many of his photographs.

Adams' most famous picture was taken late one autumn afternoon years earlier. While driving along a two-lane blacktop highway in New Mexico, he had slammed on the brakes and veered off to the shoulder. As soon as he saw the moon suspended over the tiny town of Hernandez, Adams must have known he had a chance to do something special, but he would have to hurry. The setting sun illuminated a range of snow-capped peaks in the distance, and in the foreground it reflected brilliantly off the white crosses in a cemetery. Adams scrambled to get his 8 by 10 camera ready on the tripod. Then, with the composition framed and focused, he couldn't find his exposure meter, so he estimated the aperture and shutter speed settings based on the constant for the luminance of the full moon, and released the shutter. No sooner had he snapped the picture than the sunlight faded. But by then the image he called *Moonrise, Hernandez, New Mexico* was fixed for all time.

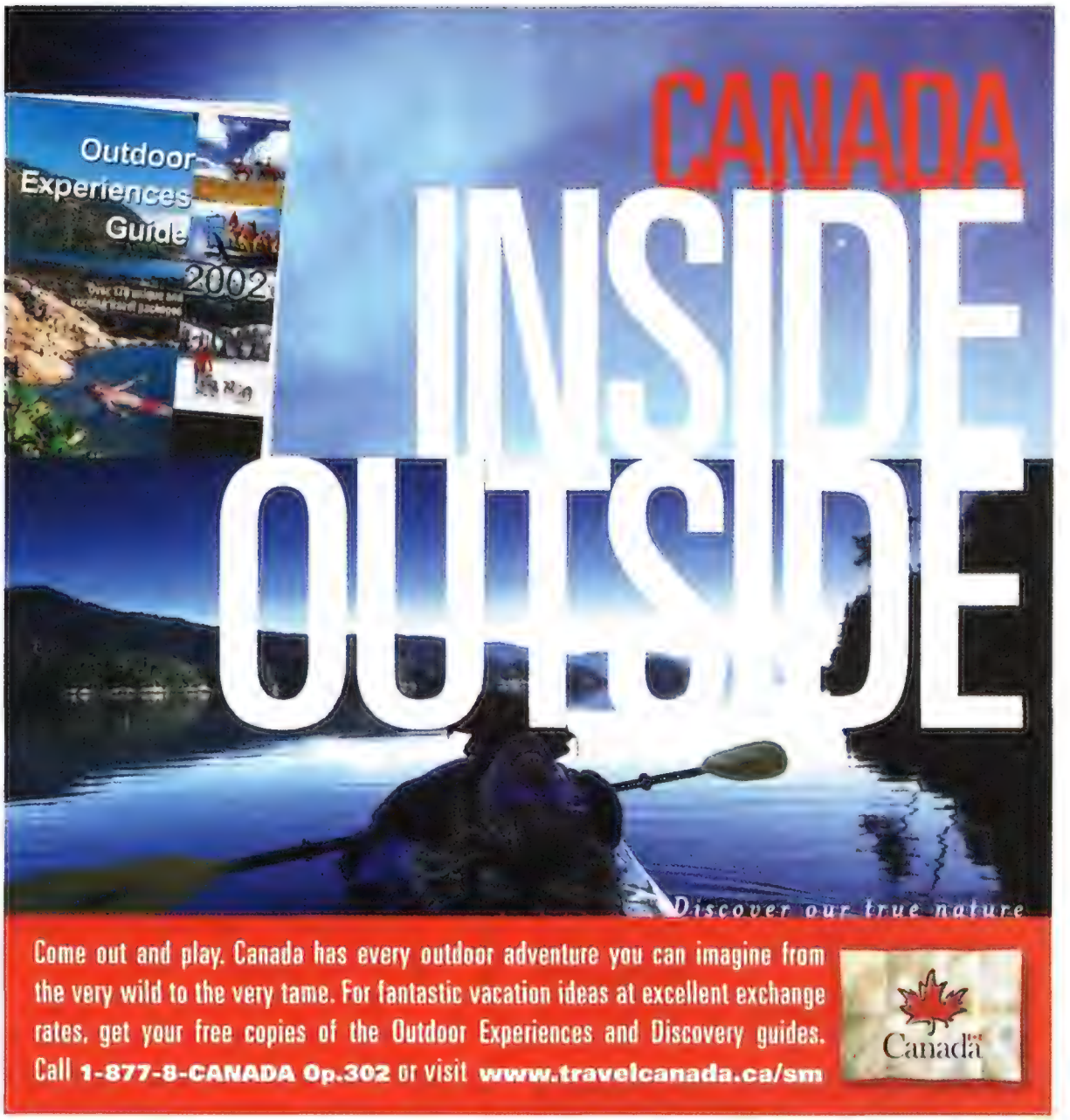
The Adams house looked out on a

ROGER RESSMEYER/CORBIS

hill of coastal chaparral. Underneath it lay a secret. Mindful of a 1937 fire that had destroyed many of his negatives in San Francisco, Adams had dug a fireproof bunker into the hill and stored his 40,000 negatives there. That nagging backlog of negatives waiting to be printed weighed heavily on his mind, not least of all because it kept him from hefting his tripod to his shoulder and heading for the hills more often.

In Adams' darkroom, a huge enlarger for producing mural-size prints was mounted on rails facing an easel that held the print paper. Occasionally I watched him "dodge and burn" in that sanctum. (Dodging excludes light from an area of a print during exposure; burning adds it.) He wore an apron and a turquoise-and-silver clasp on his string tie, which I suppose was a vestige of the days when he hobnobbed in the desert with painters Georgia O'Keeffe and John Marin and photographer Paul Strand. By continually waving his dodging wand—a cardboard disk attached to a wire handle—or moving cutouts between the enlarger and the print paper, Adams could lighten and darken specific areas of a print.

Mid-afternoons, he usually repaired to his office, where he typed the letters that were his specialty. Letters to Congress and to fellow Sierra Club board members about the issues of the day. Letters to photographers and friends. Letters and technical memos, more than 4,000 of them, to Edwin Land of Polaroid, who was paying him an annual retainer to experiment with the company's products. Now and then he would chortle at his own clever turns of phrase. Adams' unit of composition was not the sentence or paragraph so much as the bon mot. (He called the vapor trails that sometimes spoiled his photographs "sky worms.") His full stop was often not the period but the triple exclamation mark!!! He owned the first dancing-ball IBM typewriter I had ever seen.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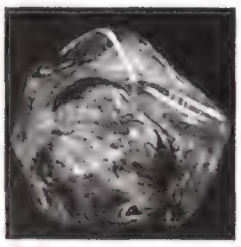

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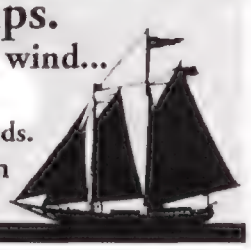

Evenings at his Carmel house, Adams presided over a long happy hour. As the sun set below his picture windows, a great procession of artists, photographers, neurotics and assorted other exotic types emerged from the canyons up and down the coast. They came in capes. They came in berets. (Growing up in Berkeley, I had known bohemians, but the ones I had known were young and rambunctious. These Big Sur bohemians were middle-aged and settled.) The gatherings were merry, indeed. Unlike many other nature photographers I have known, Adams was gregarious. At his piano, he entertained in the mirthful, bawdy style of an English music hall comedian. Then, rising from the piano stool, glass in hand, he held forth with double entendres, percussive laughter, jokes and tales.

Sometimes Adams helped me with my Big Sur project. On a table in his gallery, we would sort through the photographs I had collected. Now and then we stopped at an image and played with the cropping. Using four sheets of white paper at the edges, Adams proceeded incrementally to tighten the composition. Nothing has taught me more about photography than watching him during that process. The sheet at the right margin boldly cropped out a wide band of image from that side. The top sheet slid down several millimeters. The left sheet inched inward. Then suddenly Adams' cropping snapped an image into coherence.

It was sorcery. His eye of newt was interpretation. His toe of frog was emotion. His wool of bat was recollection of all the photographs he had seen before. Inside the accidental composition, he would find the inevitable one, where it had been all along.

The 100th anniversary of Adams' birth is an occasion for commemoration and reflection. In the first major assessment of his work since he died 18 years ago, at age 82, an exhibition featuring more than 100 images de-

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buted last March at the San Francisco Museum of Modern Art. This month it opens at the Art Institute of Chicago.

It will come as no surprise to anyone familiar with his career that Adams' centennial is not an occasion for unalloyed praise. Over the years some critics have been nothing less than dismissive. In 1938, Alfred Barr, who was then the director of the Museum of Modern Art, inquired, after viewing an exhibition of works by Adams, Weston, Stieglitz and others: "Why do [they] have to photograph bushes?" At the same show, the critic Lincoln Kirstein, peering at Adams' landscapes, asked Nancy Newhall, "Doesn't anybody go there?" The absence of people struck some viewers as heartless and cold.

One modern school of critics argues that Adams was *too* masterful. His kind of "formalism" is now out. The random and the accidental are in. Others argue that Adams is an incorrigible idealizer. Photographs like his, these critics contend, can be made only in those few vestigial places where beer cans and road signs don't mar the picture. Adams, they argue, is untrue to reality.

Reality? From where I write in Humphrey's Basin in the Sierra, I can see the top of Pilot Knob. It was here, in 1933, that my father, who died a year and a half ago at age 88, first met Adams walking through the timberline forest with his camera and tripod on his shoulder. Like Pilot Knob, the granite faces of El Capitan and Half Dome, and the leap of Yosemite Falls, and the 4,000-year-old trunks of bristlecone pines, and the headlands of Big Sur and the face of the moon, all continue to exist in real life, not just on Adams' emulsion. Ansel Adams photographed a beauty, a truth, an elemental reality, that preceded humanity and will endure long after the last critic and final beer can are gone.

Kenneth Brower has written and edited more than two dozen books about nature.

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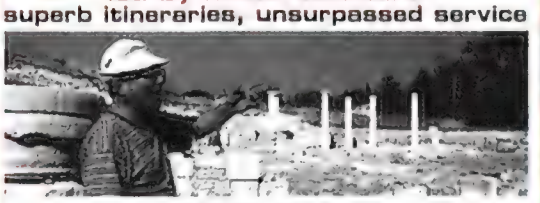

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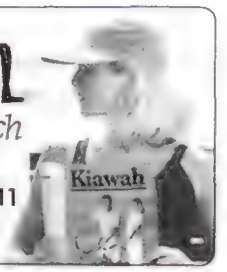

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TAKING ISSUE

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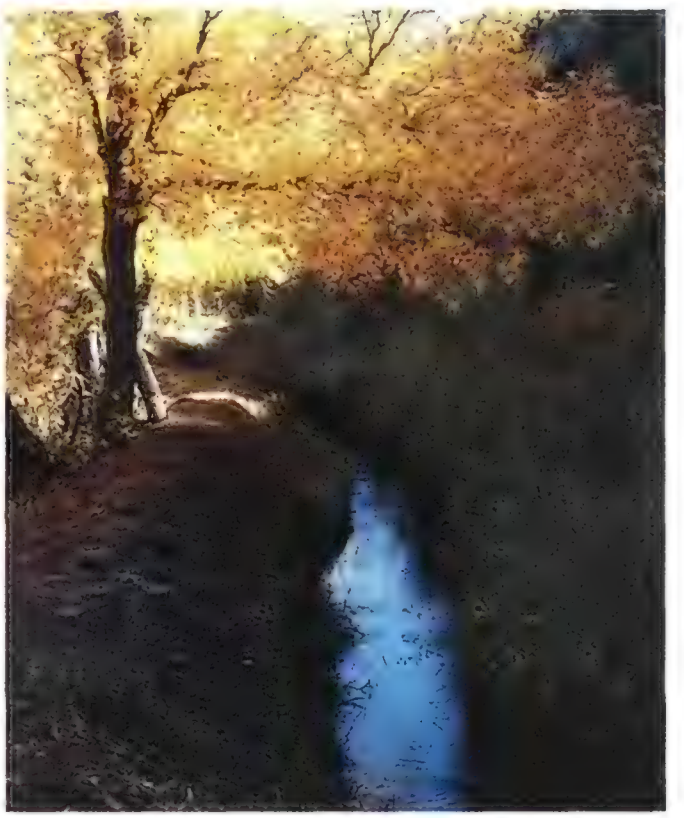
WHAT IS THE RELATIONSHIP BETWEEN DOLLARS AND SENSE?

BY VERLYN KLINKENBORG

For this department, a distinguished writer is asked to read the magazine's articles before publication and to comment or elaborate on them or take issue with them.



"Americans tend to look at the past," says Klinkenborg, "as something to escape from."

I'M BEING PAID MORE THAN a thousand dollars to write this piece. You might call it an article, an essay, an editorial, even a story. But the word in ubiquitous usage among writers and editors is "piece." The word sounds fragmentary, and it suggests an uncertainty about just what kind of "piece" this is. That's exactly right on both counts. This magazine, like other magazines, is full of pieces, if only because there's never room for the whole.

I've been writing national magazine pieces of one kind or another—including several for SMITHSONIAN—for 17 years. I think of them as appearing in an idealized white space, so it always comes as a surprise to see my words laid out in the early versions of the magazine, called galleys, and to see the photographs and all the other design elements. The finished issue is more surprising still, because the text—the editorial content—is so closely framed with ads.

I have no idea how much the editors and production staff at SMITHSONIAN make. Or what a photographer gets paid per assignment or photograph. Or how much it costs to print the magazine and distribute it, or how much of the revenue that offsets these costs comes from advertising sales and how much from circulation. I do know that there's a fixed relationship between the number of pieces you see in SMITHSONIAN, their length, and advertising revenues. I used to tell my writing students that magazine pieces exist only to keep the ads apart. It was never a joke.

This relationship is especially noticeable in a weak advertising climate, like the one we're in. Ad dollars shrink, and so does the editorial content. The length of pieces is cut, the pieces themselves become more piece-like, and the illusion of a text-rich magazine is preserved. I often hear the shadowy phrase "dumbed-down" to describe the recent history of magazines. Magazines have always

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been plenty dumb. Some people argue that the dumbing-down of modern magazines came about because of the shortening American attention span. I believe the American attention span is as long as it ever was. The fact is, if you chop the content of magazines (and, notoriously, television) into smaller and smaller bits, you have more and more edges to attach advertising to.

What gets lost isn't just the length of the pieces. It's also the passion of life as it's actually lived. Reading this issue of SMITHSONIAN, or of almost any other magazine, is like climbing aboard a tourist tram with a cheerful guide who knows his patter. I know, because I've been that guide. The briskness of the tram's motion, the way the guide directs our attention from one side of the story to the other with scrupulous fairness, allows us all to overlook the strangeness of what we're seeing.

Let me take an example from this issue. I don't know Bruce Selcraig, but I do know something about his subject in "Digging Ditches": the acequias of New Mexico. Bruce has given us a glimpse of an intricate social and geographical artifact, but I'll bet he learned far more about acequias than he could begin to fit into his piece.

The crowning moment in "Digging Ditches" comes when Selcraig quotes a water broker named Bill Turner. Turner's job is essentially to buy water rights from poor, rural, largely Hispanic farmers and sell them to rich, white urbanites. Selcraig describes Turner as someone who "refuses to romanticize the acequia culture." He quotes Turner as saying, "Change is good. Communities live and die." Turner remarks that young people in rural New Mexico are not content. "I don't want to see them imprisoned in their communities," he adds.

This is where I jump off the tram and start shouting. I want this magazine to point out that if the young

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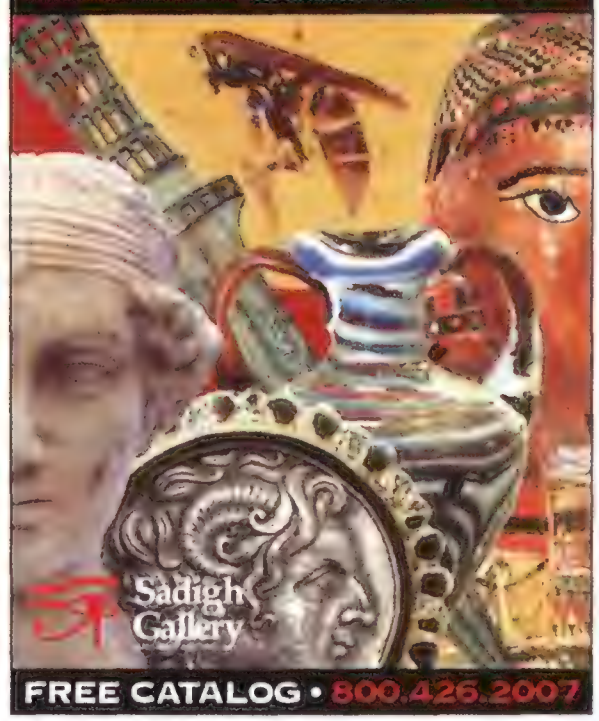

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people of rural New Mexico are imprisoned in their communities, it's because the very idea of community that would have saved rural kids and given their lives meaning is predicated on a relationship to the land that has been totally corrupted by the infusion of new wealth that Bill Turner serves. To say that he doesn't romanticize the culture implies that anyone who tries to preserve it and the values it depends on *does* romanticize it.

Selcraig doesn't skirt the issue of land prices—and I suspect he reveled in Turner's bluntness—but he can't lay enough emphasis on them either. SMITHSONIAN editorial policy, like the policy of most magazines, is nobly governed by an ideal of simple fairness and balance, which shapes the pieces' tone and keeps the tram moving right along. It is a journalistic convention. But that isn't the only convention that operates in a magazine. The subtext of the advertising—the commercial America—that surrounds SMITHSONIAN's editorial content can be summed up in a single phrase, Bill Turner's phrase: change is good. Change is profit. Change is what pays Selcraig's fee and what pays mine.

But change is only sometimes good, and some kinds of change are never good. When they aren't romanticizing it, Americans tend to look at the past as something to escape from. We tend to look at the land—at life on the land—as the past we need rescuing from. Nothing could be falser, more incomplete, especially in the rural valleys of New Mexico. This magazine is far likelier to be found in the houses of the people who are buying water rights from Bill Turner than those of the people who are selling them. You need to keep that in mind as you turn these pages. And yes, I know, I've wandered off the subject. But for once that's what I'm being paid to do.

Verlyn Klinkenborg is the author of Making Hay *and* The Last Fine Time *and is a member of the* New York Times *editorial board.*

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Sputnik turned out to be the wake-up call of the century. We would not really get over it until the day that Neil Armstrong walked on the Moon.

Barren Lands

Kevin Krajick ◆ Times Books, $26

CHUCK FIPKE, A CANADIAN GEOLOgist who is the central character of Kevin Krajick's nonfiction *Barren Lands*, certainly does not waste a lot of time trying to be liked. In this tale of his obsession with finding diamonds in the Canadian Arctic, Fipke manages to alienate just about everyone he encounters.

Krajick reports from the tundra.

Still, there's something about Fipke, and Krajick is smart enough to recognize it. He's a character who can carry a book: stumpy, paranoid, childish, absentminded, mercurial, brilliant, fearless, thoughtless.

Fipke and his partner Stew Blusson chase their dream through 20 years of hard prospecting all over North America, eventually zeroing in on the land above the tree line in Canada's Northwest Territories. They are forever working in the toughest imaginable conditions, and they always come up short—until their last big strike, north of the lonely settlement of Yellowknife. (Some idea of their payoff can be inferred from the gift Blusson gave to their alma mater, the University of British Columbia—$50 million.)

Krajick's achievement here is to extract a gripping yarn from a subject that is usually not a fun read—geology. He also gives us an eloquent portrayal of a place few will ever see, the great treeless tundra with its roving grizzlies, vast caribou herds and white wolves—a pristine landscape now threatened by mining and oil drilling.

Donald Dale Jackson is based in Connecticut.

Sputnik: The Shock of the Century

Paul Dickson ◆ Walker & Company, $27

ON OCTOBER 4, 1957, THE DAY *LEAVE It to Beaver* premiered on American television, an event took place that so stunned the United States it would be exceeded in national trauma only by the assassination of John F. Kennedy six years later. The Soviet Union launched a beach ball-size, 184-pound satellite into orbit around Earth, and with it an era of national self-searching that some say has not ended to this day.

Sputnik—a shortened Russian term for "traveling companion of the Earth"—did little more than beep as it orbited the globe every 96 minutes. But it had never occurred to any of us that the first man-made object in space would not be Made in America.

It turned out to be the wake-up call of the century. We would not really get over *Sputnik* until the day that Neil Armstrong walked on the Moon in 1969, and by then we were mired in another crisis of national self-doubt over Vietnam.

Paul Dickson has written a useful, if somewhat ill-focused, book, whose weakness lies mainly in its obsession with post-*Sputnik* political fallout rather than on the seismic shifts that the little satellite would trigger in American culture.

Ken Ringle is a reporter who is on the staff of the Washington Post.

Trieste and the Meaning of Nowhere

Jan Morris ◆ Simon & Schuster, $23

JAN MORRIS IS LESS A TRAVEL WRITER than a writer who travels, leaving glorious gusts of literature in her wake. She has written some 40 books, including celebrations of Manhattan and Venice, Sydney and Hong Kong, and has explored history as well as place.

Now, at age 75, Morris offers us what she says is her last book, and it seems a nice flourish that she invites a reader to accompany her to the heart of nowhere. Trieste, she points out, is a city that has changed its nationalities, identities and industries so often that it became a favorite haunt of expatriates and exiles.

Morris calls this her final book.

As Morris meanders among imperial coffeehouses of the Hapsburg era, and churches beloved by stray cats, she serves up vignettes of the princes and paupers who made these streets memorable. There is the Hapsburg prince Maximilian, departing to become Emperor of Mexico, where he would be overthrown and shot against a wall. An almost penniless James Joyce haunting bars and brothels as he labors over his masterpiece *Ulysses*. A young Sigmund Freud arriving with a grant from Vienna University to study the copulation of eels.

Along the way, Morris shares fragments of autobiography as well. "The past is a foreign country, but so is old age," she writes, "and as you enter it you feel you are treading unknown territory."

Paul Trachtman writes from New Mexico.

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